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ABSTRACT

This study recommends a variety of actions to create and maintain a Montana union catalog (MONCAT) for more effective usage of in-state resources and library funds. Specifically, it advocates (1) merger of existing COM, machine readable bibliographic records, and OCLC tapes into a single microform catalog; (2) acceptance of only machine readable cataloging for new acquisitions; (3) expansion of existing network terminal facilities; (4) provision for a round robin interlibrary loan communication system; (5) commitment of existing federal funding to the union list project; (6) design of a microform system conducive to conversion to an online system; and (7) installation of microcomputer equipment to upgrade interlibrary communications and reduce costs. It further recommends state legislative actions to provide financial support for the state university interlibrary loan activities and a reallocation of federal funding support. Appendices include interlibrary loan data and a list of potential libraries for a selective retrospective conversion project. (RAA)

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RESOURCE SHARING IN MONTANA:
A STUDY OF INTERLIBRARY LOAN AND
ALTERNATIVES FOR A MONTANA UNION CATALOG

Prepared for the
RESOURCE SHARING TASK FORCE

MONTANA STATE LIBRARY
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November 1980

by

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Joseph R. Matthews
Grass Valley, CA

November 1980

PREFACE

A Resource Sharing Task Force was named by the Montana State Library Commission in December, 1979. The original Task Force members included the six federation coordinators, the State Librarian, the coordinators of library development and library services at the State Library, two members of the State Library Commission, two public librarians, one state legislator and one academic librarian.

The Task Force met in January, 1980 to explore uses of coal severance tax funds and network development. The following three assignments were completed by the May meeting of the Task Force: 1) guidelines and an accountability reporting system for the use of the coal severance tax funds was prepared; 2) a profile of the major libraries in Montana was developed through the use of a questionnaire; and 3) a review and synthesis of major Montana library documents was prepared.

At the time of the May, 1980 meeting, the Resource Sharing Task Force suggested hiring a consultant to conduct a study of interlibrary loan and automated networking in the state. The Montana State Library Commission concurred and a Request for Proposal was prepared and issued in June, 1980. The RFP suggested that five alternatives should be specifically examined. These alternatives included: 1) Install WLN at each of the six federation headquarters libraries, the State Library, and the six units of the university system; 2) Install WLN in a few well-chosen locations - the State Library, three university system libraries, and two federation headquarter libraries; 3) Poor person's union catalog - microfilm the existing card catalogs in selected libraries; 4) Linking circulation systems; and 5) merging of four existing COM catalogs. Additional alternatives could be suggested by the consultant. A contract with the consultant was signed in July, 1980 and the consultant visited Montana in August, 1980. A draft of the report was submitted in mid-October and a review of the report was held with the Resource Sharing Task Force and a large number of other interested librarians in Helena on October 30, 1980. Based on the review, the report was revised and the final report was submitted to the Resource Sharing Task Force during November, 1980.

This study, by mutual agreement between the consultant and the Resource Sharing Task Force, does not attempt to compare and contrast the capabilities of the bibliographic utilities - OCLC, RLIN, UTLAS, and WLN. Rather, the study recognizes that both OCLC and WLN terminals are in Montana and assumes that the number of libraries using both utilities will continue to grow. Similarly, the study does not attempt to compare and contrast the capabilities of the turnkey circulation system vendors. Both the bibliographic utilities and the circulation systems marketed by various vendors offer differing products that will meet the needs of different types and sizes of libraries with varying degrees of success.

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EXECUTIVE SUMMARY

Libraries are not able to buy all the materials that their patrons need because of fiscal limitations and the overwhelming volume of materials that is published. A practical solution has evolved among all types of libraries to solve this problem whereby a library borrows materials from other libraries in order to fill patrons' requests. This concept is called interlibrary loan or ILL.

One of the keys to efficient resource sharing and ILL is knowledge of what titles are owned by what libraries - a union catalog. A union catalog is a central source which contains the holdings information of more than one library. It can be a card catalog, COM (computer output microform) catalog, or computer data base such as a bibliographic utility (ie, Washington Library Network or OCLC).

Montana libraries do not now have a direct means of knowing the location of monographic materials (books and reports) in other Montana libraries, in other words, an in-state union catalog. They use the Pacific Northwest Bibliographic Center (PNBC) in Seattle to locate and borrow materials of libraries both in-state and out-of-state. PNBC maintains a union card catalog of holdings of major Northwest libraries, including 7 Montana academic and public libraries. Montana libraries are active users of interlibrary loan. In fact, as a state, Montana is a net borrower of materials from libraries in other states. Within Montana, the two university libraries are the major lenders of materials to the public libraries and other academic libraries.

Interlibrary loan requests are transmitted by teletype (TWX) machines located in 9 Montana libraries. This telecommunications system is costly and cumbersome.

The Resource Sharing Task Force of the Montana State Library Commission was formed and met during 1980 to plan for an improved means of sharing Montana libraries' resources. It was composed of public and academic librarians, federation coordinators, State Library staff and Commission members, and a state legislator.

The Task Force was concerned about the costs of ILL and the length of time to fill requests. It questioned the long-range effectiveness of present ILL practices and of the teletype system of communication. It also questioned reliance upon an ILL system which does not promote the development of the state's ability to identify and use its own library resources to the highest degree and in the most equitable manner possible.

Library automation was another issue considered by the Task Force. Several Montana libraries have COM (computer output microform) catalogs, automated circulation systems for book inventory control, and bibliographic utility memberships for use in cataloging and interlibrary loan. Present and potential automation activities represent a sizable investment of funds. They also represent the promise of a quicker and more effective means of identifying and sharing Montana library resources if planned well.

The Task Force recognized the need to share Montana library resources and spend its resource sharing dollars more effectively. Further, it recognized that planning was necessary for the wise development of library automation in the state. J. Matthews

and Associates was commissioned to conduct a study of the resource sharing practices within the state, specifically ILL, telecommunications, and automation activities, and to consider alternatives for creating a Montana Union Catalog.

Several alternatives for union catalog development and telecommunications were suggested to J. Matthews and Associates by the Resource Sharing Task Force. During the course of the study, the consultant added other alternatives. In all, eight alternatives were subjected to a thorough and systematic evaluation in the hope that one single course of action would best meet the needs of Montana libraries. These alternatives included: membership in the bibliographic utility Washington Library Network (WLN), the merging of machine readable records of COM catalogs and current acquisitions from book jobbers, and the routing of ILL requests on an in-state "round robin."

The study was not a comparison of the bibliographic utilities OCLC and WLN. Each utility offers various features that will better meet the needs of different types of libraries. In fact, both OCLC and WLN terminals already exist in Montana. Thus, a means of providing access to the collections of all libraries - which makes use of existing automated systems and provides direction for future automation development - was an underlying premise of this study.

J. Matthews and Associates concluded that a combination of the best elements of several alternatives be implemented since no single alternative would meet the needs of all Montana libraries. To this end, an Action Plan for Montana libraries was proposed that recommends a variety of actions to create and maintain a Montana Union Catalog,

called MONCAT in this report. This course of action was determined to be the most realistic in that it is designed to be flexible, acceptable and viable for Montana libraries. The purpose of the Plan is to launch Montana libraries on a course of action that will use in-state library resources and expend library funds more effectively. Specifically:

- o Specifications should be prepared for the merging of:
 - 1) the four existing COM catalogs, and 2) machine readable bibliographic records from other sources, such as OCLC tapes, to produce the first and subsequent editions of MONCAT. Initially, MONCAT will be produced in microform.
- o Notify all book jobbers that specified Montana libraries wish to receive MARC (ie, machine readable) records for all current acquisitions.
- o WLN terminals should be installed in five additional sites - at least three university libraries, the State Library, and another federation headquarters library.
- o A selective retrospective conversion project should commence immediately for a number of Montana libraries. Holdings of selected Montana libraries should be added to the MONCAT.
- o Implement a proposed "round robin" communication of ILL requests as an interim, 3-5 years, measure to tap existing in-state resources.

- o The continuing importance of the Union List of Montana Serials, ULMS, should be recognized through the designation of either Coal Severance Tax funds or LSCA funds for the annual updating, production and distribution of ULMS.
- o It is likely that MONCAT will move from a microform union catalog to an online union data base in a three to five year time period as the size of the MONCAT data base increases and the costs for producing and maintaining MONCAT increase as well. The microform MONCAT should be developed so as to allow a smooth transition to the online medium.
- o In addition to the review of the options for creating a Montana Union Catalog, this study examined the current ILL teletype communication system. The consultant recommends the replacement of this TWX system with a purchased microcomputer based control unit, printing terminal, and high speed modem. The recommended equipment would result in reduced ILL communication charges of 60% to 80% per year.

J. Matthews and Associates recommends that Montana should proceed with the development of MONCAT with the goal that all libraries should be able to contribute records of their holdings in machine readable form. MONCAT should be linked to a bibliographic utility with regional and national ties. Montana cannot continue to depend upon its present and costly interlibrary loan system which portends

even greater costs in the future while providing Montana libraries with diminishing ILL services.

Finally, additional effort must be made by all those concerned with library services in communicating with the State Legislature over two issues. First, the important role that the university system libraries fulfill in the Montana resource sharing network is perhaps not fully appreciated in the Legislature. The collections of the university system libraries are designed to meet the needs of their students, faculty, and staff. Yet, these same collections complement the collections found in Montana public libraries; Montana citizens, through their public libraries, routinely draw upon these resources through interlibrary loan. University library collections should be supported accordingly. And second, the extensive use of federal Library Services and Construction Act (LSCA) dollars for the daily operations of the State Library - 46% of the State Library's budget - is preventing Montana libraries from developing and implementing projects that could reap handsome benefits for Montana libraries in terms of future cost avoidance and immediate improved services to patrons.

I. INTRODUCTION

In theory, a library buys the necessary materials that its patrons will require and these materials, hopefully, are to be found on the library shelves when the patron arrives. Unfortunately, libraries do not exist in a theoretical world but are faced with fiscal limitations, more demands than they can possibly serve, and changing needs of their clientele. Thus, in spite of the professional librarian's best attempts to build a strong collection of materials, a library is unable to meet all of the demands of patrons. To meet this need a particularly unique concept has evolved among all types of libraries, whereby one library loans to another library a book or other material desired by a patron from the requesting library. Such a concept is called interlibrary loan or ILL. This positive attitude among librarians toward resource sharing has meant that all libraries have been able to improve the quality of services to their patrons.

Obviously, one of the keys to efficient resource sharing and ILL is knowledge of what titles are owned by what libraries - a union catalog. A union catalog may encompass a group of libraries from within one state, may include all libraries from within one state, or may include libraries from a geographic region - such as the Pacific Northwest region. In fact, the Pacific Northwest Bibliographic Center (PNBC), which has a main entry union card catalog that contains over 4 million records, acts as a ILL switching center in the Pacific Northwest by providing location information for a library desiring to borrow a specific title. In addition, an obvious component of ILL is cooperation. And cooperation assumes that everyone will loan to everyone else.

In Montana, there are 122 public libraries including branches, 12 academic libraries, 364 school and 88 special libraries. Within the state, six regions or federations of public libraries have evolved. Headquarters libraries were named for each federation for the purposes of cooperative library services and resource sharing.¹ While there is diversity among the federations as illustrated by a variety of services offered member libraries, the focus of this report is on interlibrary loan activity at the federation, state and regional levels. The development and evolution of the federations during the last few years has been a significant accomplishment for Montana libraries.

1. THE PRESENT INTERLIBRARY LOAN STRUCTURE

The structure for resource sharing and interlibrary loan is called the Montana Information Network and Exchange (MINE). In 1974, a teletype (TWX) communication system was established among federation headquarters libraries, the State Library, the University of Montana and Montana State University, and the Pacific Northwest Bibliographic Center. PNBC has for a number of years received main entry cards from seven of the major libraries in Montana.² Because no union catalog of Montana holdings exists, the decision was made to make PNBC the switching center for Montana ILL requests. ILL protocols (procedures) were established which require the ILL requests from participating federation libraries be sent to federation headquarters libraries; if the request can not be filled at federation headquarters, requests are sent on to PNBC.

There are some exceptions to this procedure because of several resource centers in the state: Parmly Billings Library receives fiction requests from other federation headquarters libraries; the City-County Library of Missoula receives requests for juvenile titles; the State Library acts as a back-up resource for public libraries for unverified requests, government documents, and subject requests. The State Library offers an

online literature search service as a part of its reference back-up service. If requests can't be filled at these resource centers, they are sent to PNBC.

At this point it is important to recognize that there are two categories of loans occurring. For the purposes of this study, these two types of resource sharing are defined. When federation member libraries send a request to a federation headquarters library and it is filled, this will be called a federation headquarters library loan. Unfilled federation member library requests and ILL requests made by patrons of the federation headquarters library are called ILL loans. This is important for two reasons:

- 1) two different types of activities are occurring (small libraries gaining access to a large regional collection within the state and ILL activities) and,
- 2) this will allow comparison of ILL statistics from surrounding states.

During 1979-80, public libraries through the federation generated 51,295 federation headquarters libraries' loans and ILL requests. Of the 40,975 requests that were sent to the appropriate federation headquarters library, an average of 71% of these requests were filled with federation headquarters library loans. Exhibit 1 shows the source and destination of all federation headquarters libraries loans and ILL requests.

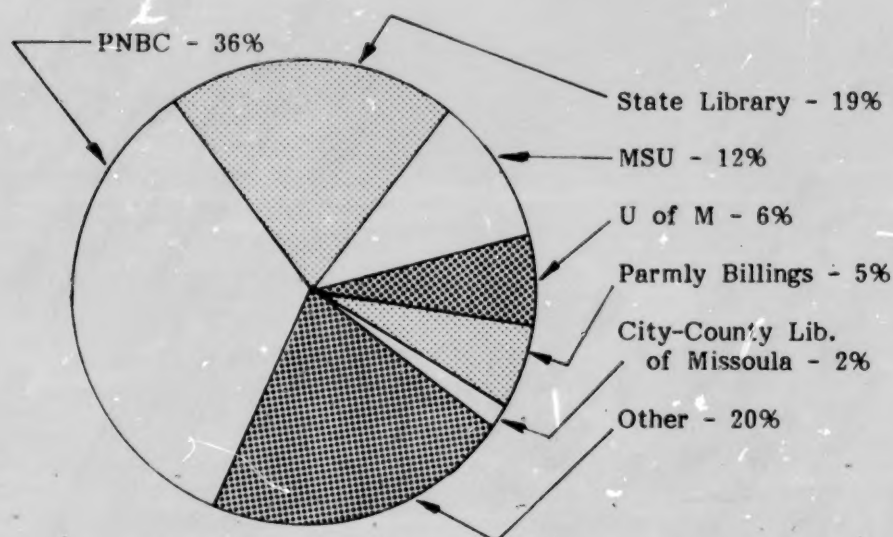
The ILL requests are then forwarded to the appropriate library following the current Montana ILL protocols. When looking at Exhibit 1, it is clear that the Broad Valleys and Tamarack Federations rely heavily on the MSU and U of M libraries to fill ILL requests. About one-third of the Broad Valley Federation ILL requests are filled at the MSU library and about 25% of the Tamarack Federation ILL requests are filled at the U of M library. In fact, federation staff members routinely search the university library catalogs to fill ILL requests. This will be discussed further in a later section.

Exhibit 1: Summary of Federation Headquarters Library (FHL) Loans and ILL Requests, FY 1979-80

Name of FHL, City	Participating Member Lib. Requests	FHL Loans	% Request Filled at FHL	Number Unfilled Requests	# ILL Requests from FHL	Total ILL Requests	 ILL Requests Forwarded to (Number of Requests)							Total
							PNBC	State Library	MSU Bozeman	UM Missoula	Parmly Billings	City-Co Library Missoula	Other	
Broad Valleys, Bozeman	14,075	9,215	65.5%	4,960	1,116	5,976	1,176	1,553	1,983	25	247	131	861	5,976
Golden Plains, Glasgow	1,693	1,066	63.0	627	1,764	2,391	575	434	257	59	273	38	755	2,391
Pathfinder, Great Falls	4,601	3,973	86.4	628	1,099	1,727	1,111	194	16	18	143	1	244	1,727
Sagebrush, Miles City	4,118	2,632	63.9	1,486	1,873	3,359	1,129	1,205	205	200	380	109	131	3,359
South Central, Billings	8,861	6,943	78.4	1,918	2,736	4,654	2,194	507	219	59	-	56	1,619	4,654
Tamarack, Missoula	7,627	5,077	66.6	2,550	1,732	4,282	1,911	293	94	1,019	8	-	957	4,282
TOTALS	40,975	28,906	70.5	12,069	10,320	22,389	8,096	4,186	2,767	1,380	1,051	335	4,567	22,389

The initial destinations of ILL requests, including subject requests, are shown in Exhibit 2.

Exhibit 2: Initial Destination of ILL Requests From Headquarters
(Percent of Total Requests)



As seen in Exhibit 2, PNBC's role as an ILL switching center for Montana public libraries is evidenced by the large number of ILL requests forwarded to it. Some 54% of the total requests received by PNBC from all Montana libraries are from the public libraries. The rest of Montana's ILL requests forwarded to PNBC are about evenly split between the State Library and the universities, colleges and special libraries (See Exhibit 3 for further details). The difference between the PNBC totals shown in Exhibit 1 and 3 are made up of requests forwarded initially to a Montana resource center that are not filled and the ILL requests are subsequently sent to PNBC.

Exhibit 3: Total Montana ILL Requests Forwarded to PNBC, 1979-80

<u>Source of ILL Requests</u>	<u>No. of Requests</u>	<u>% of Total</u>
Public Libraries	8,480	54%
State Library *	3,447	22%
College, university, & special	3,773	24%
TOTAL	15,700	100%

* Includes a combination of State agency and public library ILL requests.

Approximately one-third of the total Montana ILL requests sent to PNBC are returned to the state to be filled by Montana holding libraries, according to PNBC statistics. Of these, 55% (2,241 requests) are filled by the University of Montana and Montana State University libraries; 21.5% by the federations (principally the Pathfinder and South Central Federation Headquarters libraries); and 16.6% of the returned requests are sent to the Montana State Library.

Exhibit 4 details the costs of providing ILL services to the patrons of Montana libraries.

Exhibit 4: Montana ILL Costs, 1979-80

<u>Cost Component</u>	<u>Number of Transactions</u>	<u>Total Cost</u>	<u>Cost Per Transaction</u>
Statewide use of PNBC Teletype network	15,700 requests	\$70,079	\$4.46
(6 federations, State Library & 2 Universities)	25,000 messages *	33,000	1.32
ILL services in the six federations	51,295 requests	237,797	4.64
State Library ILL Budget	14,733 requests	79,294	5.38
U of M and MSU ILL costs	20,044 requests and loans	56,395	2.81
TOTAL **	34,893	\$476,565	\$13.66

J. Matthews & Associates

* Estimated

** Components of total: 22,389 federation headquarters libraries ILL requests, 7,813 ILL requests from the State Library for State agencies, and 1,944 University of Montana ILL requests and 2,747 Montana State University ILL requests = 34,893 requests.

A major impetus for this study is the current and the anticipated future PNBC costs. In addition, a primary goal for Montana libraries is to develop a resource sharing network that will utilize current and potential Montana library resources in an efficient manner. In addition to the rising costs of PNBC, use of PNBC also results in increased lag time before the patron's ILL request is filled and made available to the patron. Currently, the time to fill an ILL request averages between 2 and 3 weeks. However, in some cases lag times of several months are not uncommon. Exhibit 5 provides an overview of the ILL process. From this overview it is possible to begin to appreciate why it can take so long to fill an ILL request. This is compounded since most steps in the process are manual procedures.

Taking the total public library ILL volume in the state (22,389) and dividing by Montana's 1979 estimated population (786,000), it is possible to compute an ILL rate of 2.8 per one hundred residents. When compared to the per capita ILL rates of other states, (see Exhibit 6), Montana has ILL rates that are comparable with surrounding states.

2. THE PRESENT STUDY

The Resource Sharing Task Force asked J. Matthews and Associates in July, 1980 to develop a plan for the implementation of a resource sharing network among

Exhibit 5: ILL Activities and Potential Time Lags

ILL Request Made by Patron	Request Forwarded to Fed Hq Lib	Requests sent to In-State * Resource Lib	Request Forwarded to PNBC	Request Forwarded to Owning Lib	Requested Item Sent to Borrowing Lib	Requested Item Received -Patron Notified	Patron Borrows Material
o	o	o	o	o	o	o	o
Local library verifies biblio- graphic information	Searched & some are filled	Searched & some are filled	Searched and locations noted	Searched & Item pulled from Shelf	U.S. Mail	Item sits on shelf until patron comes in	

TIME →

o = ILL Activity

* In-State Resource Centers = State Library, Parmly Billings Library, and the City-Co Library of Missoula.

Exhibit 6: ILL Statistics for Selected States

	<u>Estimated Population (July 1, 1979*)</u>	<u>Total Circulation in All Public Libraries</u>	<u>Per Capita Circulation</u>	<u>Total ILL Requests in All Public Libraries</u>	<u>Per Hundred Capita ILL Requests</u>
N. Dakota	657,000	2,552,734	3.9	10,554	1.6
Oregon	2,527,000	13,748,447	5.4	76,570	3.0
S. Dakota	689,000	2,954,651	4.3	15,734	2.3
Washington	3,926,000	24,687,672	6.3	89,989	2.3
Wyoming	450,000	2,843,966	6.3	13,500	3.0
MONTANA	786,000	3,607,441	4.6	22,389	2.8

*Source: "Annual Estimates of the Population of States: July 1, 1970 to 1979" U.S. Department of Commerce, Bureau of the Census. Current Population Reports (Series P-25 No. 876) February, 1980. Other data reported by each State Library.

Montana libraries. An optimal plan will capitalize on the existing and potential resources available to libraries. These include people, services, materials, fiscal and automation resources.

ILL requests are either for monographs (books) or for a copy of a particular article appearing in a journal or periodical - called a serial. Since Montana already has a microfiche Union List of Montana Serials (ULMS) the focus of the report is primarily directed at monographs. ULMS, three years old, is currently being updated on the WLN system. The importance of ULMS as a location tool for Montana serials and in aiding ILL requests can not be over-emphasized. Thus, it is recommended that the importance of ULMS be recognized through the designation of either Coal Severance Tax or LSCA funds for the annual updating, production and distribution of ULMS. However, it should be noted that Montana will still rely on PNBC as a back-up for ULMS. About 17% of Montana's ILL requests sent to PNBC are requests for periodicals.

The consultant met with the Resource Sharing Task Force in August, 1980 to discuss the study and to identify a mutually agreeable set of expectations concerning the study. Following this, the consultant met with staff of the Office of Budget and Program Planning, the Governor's Telecommunications Advisory Council, and the Office of the Commissioner of Higher Education. This was followed by a ten day tour of Montana to visit federation headquarters libraries, the university and college libraries, and some small public libraries. In all some eighteen libraries in eleven different cities were visited. During each visit an attempt was made to gather information about the problems and successes of Montana ILL activities. ILL statistics and budget information were provided by each library.

As a part of this study, an ILL survey of holdings was conducted. A copy of every monograph ILL request was made for a two week period. Academic libraries selected a sample of the prior year ILL requests since the school year had yet to begin and thus ILL requests being processed was very low. All ILL requests were arranged in alphabetical order and a copy of the combined list of ILL requests was distributed to each federation headquarters library, the State Library, three university libraries, three private college libraries, and the Lewis & Clark library so that they could check their respective catalogs for holdings. The purpose of this survey was to determine the potential impact of a Montana Union Catalog. In addition, this combined list of ILL requests was given to both PNBC and WLN to determine holdings. Lois Fitzpatrick, the Carroll College librarian, checked the sample to determine OCLC holdings. At the same time, WLN holdings were updated by Ellen Newberg at the Parmly Billings Library. In all a total of 610 ILL requests were gathered during a two week period, August 25th through September 5, 1980. Time constraints in completing the study prevented a longer time period to collect a larger sample of ILL requests. However, the number of requests does provide an adequate sample size and is representative of the distribution of ILL requests sent to PNBC.

As shown in Exhibit 7, about 59% of the ILL requests could be filled by Montana libraries. The fill rate of federation headquarters libraries' ILL requests is slightly higher, ranging from 65% to 80%. Only the South Central Federation has a relatively low fill rate from among Montana federation headquarters libraries. The fill rates for the two Montana university libraries is similarly low, 18% and 30%, although the prospects are much brighter for the other Montana colleges. It should be noted that the requests located in the card catalog were not checked against the shelf to determine availability - which would bring down the potential fill rate, i.e., item owned by the

Exhibit 7: ILL Requests and the Potential Fill Rate, by Library

Requesting Library	Number ILL Requests	Number Requests with Montana Holdings	* Number Requests with Holdings in WLN Data Base	** Number Requests with Holdings in PNBC Union Catalog	Number Requests with No Holdings in Montana, the WLN data base, or PNBC	* Number Requests with Holdings in OCLC Data Base
Broad Valleys	101	83	14	7	1	14
Golden Plains	32	25	1	3	3	6
Pathfinder	17	12	3	0	2	4
Sagebrush	55	38	8	5	5	15
South Central	73	31	22	8	15	37
Tamarack	95	63	15	8	10	27
Montana State Library	93	57	27	4	7	31
University of Montana	67	12	14	8	34	32
Montana State University	36	12	11	9	5	20
Montana Tech	14	7	1	4	2	7
Northern Montana College	3	3	-	-	-	-
Eastern Montana College	14	9	4	1	1	3
Carroll College	10	7	0	2	1	2
TOTALS	610	359	120	59	86	198
Percent of Total Requests	-	59%	20%	10%	14%	32%

* Ignoring all requests that could be filled by Montana libraries

** Ignoring all requests that could be filled by Montana and WLN libraries

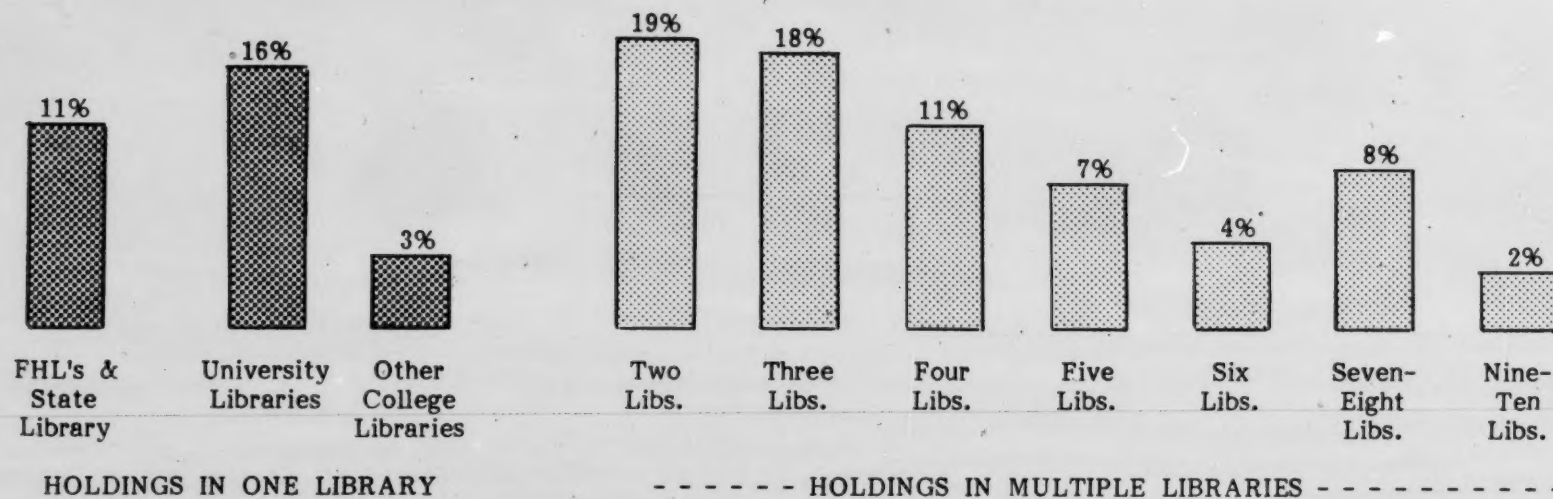
library but it is checked out. In addition, a few libraries involved in the survey would not be initially involved in a Montana Union Catalog and thus the fill rate would be lowered slightly.

Exhibit 8 provides an indication of the distribution of unique copy and multiple holdings among Montana libraries. Appendix A provides a more detailed listing of the ILL survey findings. An additional 20% of the ILL requests may be found in the WLN data base with holding symbols attached (as shown in Exhibit 7). Of the remaining ILL requests, PNBC can identify holding libraries for 59 requests by searching their main entry union card catalog. Some 86 ILL requests, or 14% of the initial 610 ILL requests in the sample have no known locations in Montana, the WLN data base or in the PNBC main entry union card catalog. However, it should be noted that PNBC has additional tools to attempt to find locations for these remaining ILL requests. Locations in the OCLC data base may be found for 198 or 32% of the total requests. The majority of these locations are libraries outside the Pacific Northwest region. A total of 50 ILL requests, or 8% of the total requests, may be found only in the OCLC data base (data not shown in Exhibit 7).

Using the data collected through the site visits and contacts with a variety of vendors, the consultant prepared an analysis of the alternatives. This analysis is followed by an action plan for the implementation of a resource sharing network among Montana libraries.

A draft of the final report was submitted to a three person Resource Team of acknowledged authorities representing various viewpoints and experiences in the area of resource sharing. The Resource Team members included: Gary E. Strong, California State Librarian and former Washington State Deputy Librarian; Donna Selle, Coordinator

Exhibit 8: Distribution of Holdings for ILL Requests Among Montana Libraries



of the Washington County Cooperative Library Services, Aloha, Oregon; Helen Miller, formerly the Idaho State Librarian. The Resource Team's responsibility was to critique and ensure the thoroughness of analysis and the practicality of all recommendations.

After the Resource Team's concerns had been incorporated in the report, a draft of the final report was submitted and distributed to members of the Resource Sharing Task Force and other interested persons. On October 30, and 31st, the consultant met with the Resource Sharing Task Force and others in Helena, Montana to thoroughly discuss each of the alternatives and the proposed plan for a resource sharing network in Montana. Based on the comments received during the course of the meeting, the final report was revised and submitted in November, 1980.

II. OBSERVATIONS REGARDING THE CURRENT ILL SYSTEM AND SUGGESTIONS FOR CHANGE

This section discusses and makes recommendations concerning some of the problems that exist with current ILL practices. A review of the ILL communication options, an examination of issues pertaining to a Montana Union Catalog of Monographs (MONCAT), and a projection regarding the future role of PNBC as an ILL switching center follows.

1. CURRENT INTERLIBRARY LOAN PRACTICES

While the focus of this report is on interlibrary loan activities, especially those ILL activities at the levels of the federation headquarters libraries and at the state level, it would seem that Montana libraries are meeting the majority of their patrons needs as evidenced by the small total of ILL requests when compared to the total public library circulation figures, as shown in Exhibit 9.

Exhibit 9 also provides the breakdowns of all ILL requests by federations with some interesting findings. First, it would appear that the some federations could do more in terms of encouraging ILL among their federation member libraries since their Per Capita ILL requests per 100 population are significantly lower than those of their counterparts. And second, after calculating a cost per ILL request it is clear that some federations are doing a better job than others.

This only serves to highlight a problem, which is what are permissible ILL

Exhibit 9: Fed. Hdqt's Library (FHL) Loans & ILL Statistics and Costs, 1979-80

	Total FHL Loans & ILL Requests	% Member Library Requests Filled at Headqtrs	Population of Federation Area	Per Hundred Capita FHL Loans & ILL Requests	Total Circ. * Per	Circ. Capita	Total Titles in Fed Hdqt Library	Total titles in FHL as a % of Total titles in Fed'tion	ILL Budget of Federation	Cost Per FHL Loans & ILL Requests
Broad Valleys	15,191	65.5%	167,164	9.1	716,723	4.3	34,194	11.2%	\$54,643	\$3.60
Golden Plains	3,457	63.0	38,084	9.1	176,145	4.6	38,975	30.8	22,389	6.48
Pathfinder	5,703	86.4	144,070	4.0	648,419	4.5	101,579	33.2	40,356	7.08
Sagebrush	5,981	63.9	57,137	10.5	412,918	7.2	41,702	24.5	36,568	6.11
South Central	11,597	78.4	135,263	8.6	679,529	5.0	144,892	67.6	40,230	3.47
Tamarack	9,359	66.6	143,935	6.5	973,707	6.8	90,264	27.8	43,611	4.66
TOTALS	51,288	70.5%	685,653	7.5	3,607,441	5.3	451,606	31.2%	\$237,797	\$4.64

* Source: Montana Library Directory, 1980 with Statistics of Montana Public Libraries July 1, 1978 - June 30, 1979, pg. 42-47.
Total circulation = local circulation plus bookmobile circulation.

expenses and what costs should be attributed to other programs of service? In the consultant's view, more precise guidelines for allowable budget items and performance measures must be drawn up by the State Library in consultation with the Federation Coordinators. Three examples will highlight this more clearly. Some federations call their member libraries on a regular schedule, weekly or every 10 days or so, to ask for ILL requests and to talk about any particular problems which may be occurring at the local library. While admirable in its intent, this is not an acceptable ILL cost in the consultant's judgement. Should a patron's ILL request be made the hour or day after a regularly scheduled call took place, the patron's ILL request could wait from 7-10 days before further action takes place. In addition, some libraries do not have telephones. Thus, it recommended that telephone calls for ILL purposes should not be a part of any federation's ILL budget program. ILL requests should be mailed from each federation member library to the federation headquarters library as received, i.e., on a daily basis if need be. Should a library receive a rush ILL request, the individual library should place a telephone call to it's appropriate federation headquarters library. Second, outreach personnel should not be included in a federation headquarters library ILL budget. And third, extensive travel money does not belong in an ILL budget. Telephone contact is, however, a valid activity of the federation headquarters in providing overall support to member libraries.

It is essential that the borrowing library verify as fully and carefully as possible the bibliographic information of each ILL request if it is to avoid imposing unnecessary work on the federation headquarters library and to ensure that the ILL request is not misinterpreted. To this end, some libraries that can not afford it and do not have Books in Print should be provided a current edition copy out of federation headquarters library funds. In addition, the ILL request forms should be modified to include a box

so that a borrowing library could indicate that BIP had been checked and purchase price indicated, if found. Other standard verification sources might also be placed on the ILL request form as an aid to libraries, and to encourage them to carefully check all sources prior to forwarding the request to the federation headquarters library. To the extent that these libraries have need for training to improve verification, then federation headquarters library staffs, in cooperation with the staff of the Montana State Library and the appropriate division or committee of the Montana Library Association, should develop continuing education programs in this area. A Continuing Education program is especially important in the face of likely ILL protocol changes. A Continuing Education program might include basic reference, the reference interview, etc. in addition to training in ILL verification.

The standard ILL statistical reporting form ought to be improved so that additional statistics are kept as a routine matter. Specifically, the ultimate fill rate for each federation of all ILL requests should be captured and monitored on a regular basis. And finally, each federation should take a sample each month or bi-monthly of its ILL requests and determine the average time it takes to complete an ILL request, e.g., 2 days to fill a federation headquarters library loan, 4 days to fill an ILL request found in MONCAT, 7-10 days to fill a request sent to PNBC, etc. The sample and evaluation process should be carefully designed by the State Library in conjunction with the federations to ensure that data is comparable statewide.

The local library should consider each ILL request for purchase. In the consultant's view, local library book budgets should be modified to reflect user demands for materials, e.g., ILL requests, rather than collection development activities.

Part of each federation's ILL budget is designated for purchasing materials to meet ILL requests. This is an appropriate use for these funds. Given the increasing costs of materials it is the consultant's judgement that the current policy which "suggests that a federation library consider for purchase those materials that appear in Books In Print and cost less than \$5.00" should be re-evaluated to both increase the price level for the item appearing in Books In Print to \$10-\$15 and make the policy stronger than "consider" but less than "shall" or "in all cases," e.g., "in most cases." This may mean the need for an increase in each federation's budget for ILL purchases but this is only proper. Of the 341 ILL requests for which a price could be determined, 170 or 50% were priced from \$.50-\$10.00. One incentive for such a policy is that the library is assured of at least one circulation for the purchased item. A similar statement can not be made for a fair amount of the purchases libraries currently make. When reviewing Exhibit 1, the fill rate for requests at the federation headquarters libraries range from 63% to 86%. The goal ought to be a fill rate of about 80-85%, and selected purchases will assist a federation headquarters library in attaining this goal.

One of the arguments against such a course of action is that it can take longer to purchase an item than to obtain it on ILL. While perhaps true in some cases, this is really not a valid argument. A federation headquarters library could establish several accounts with bookstores, either in it's own "home" town or in other Montana cities. In addition, most of the book jobbers' have "hot lines" to receive rush orders over the telephone with the item being shipped the next day. Some book jobbers provide you with either a weekly or bi-weekly microfiche inventory listing so that you know in most cases what is in their stock. Other options might include having the federations explore a cooperative ordering service, not a centralized processing center. The result

could be improved discounts from the book jobber and might employ a CRT terminal that could be linked to the jobbers automated ordering service. If such a service is used, orders are usually received 3-5 days after the order is placed. One of the main underlying issues in this area involves discounts from the vendor versus speed of delivery. For ILL items, the consultant recommends faster delivery times with slightly lower discount rates.

ILL requests should also be considered for purchase by the Montana State Library and the academic libraries. In fact, review of ILL requests for purchase at all levels should be a matter of course.

The U. S. Postal Service is a problem that a few of the federations mentioned. Some of the federations, the State Library and the two university libraries might experiment using United Parcel Service (UPS) or a similar service - Greyhound, Trailways, etc. to determine its costs and service capabilities.

It is the understanding of the consultant that non-WLN member libraries may purchase copies of the WLN Resource Directory, a microfiche copy of the entire WLN data base. This Resource Directory could then be consulted for holdings in the Pacific Northwest and the library could then go direct with its ILL request, provided the State amends its current ILL protocols. Thus, depending upon the results of this study, it may be necessary for the State of Montana to take whatever action is necessary to modify its ILL protocols, to allow some or all federation headquarters libraries, the State Library, and the six university libraries to purchase a yearly copy of the WLN Resource Directory (cost is \$200 per year per copy).

Currently, for a majority of federation headquarters libraries that receive an ILL request from another federation headquarters library, and the requested item is out on loan, the owning federation headquarters library will not place a hold on the item. The federation headquarters library does place holds on items in its collection for federation member libraries. From the perspective of the owning library, since the ILL requested item is out on loan to one of its patrons, there is a high probability that the item will be wanted by another of its own patrons. Thus, servicing an ILL request from another federation headquarters library is removing a valuable resource from its currently circulating collection. This means that the owning federation headquarters library is less inclined to agree to place holds on heavily circulating items for another federation headquarters library. From the perspective of the requesting federation headquarters library, it is frustrating to know that another federation headquarters library owns a copy and yet the library can't borrow it. The consultant tends to favor the position of the owning library, which is federation headquarters library will only place holds for federation member libraries. As recommended above, the federation headquarters libraries ought to increase their ILL book budgets. If this were to happen, this should remove some of the pressures that currently exist with some of the federation headquarters library collections, especially if the material requested from one federation to another is in print and costs less than \$15.00.

The role that the university system libraries play is an important and vital one for the Montana resource sharing network. Their collections complement the collections found in Montana public libraries. This role is perhaps not fully appreciated in the legislature. About 55% of the Montanan ILL requests returned to Montana by PNBC each year are directed to the two large universities in Montana. Thus, it is recommended in the absence of increased state funds for the university library's ILL budgets that

some of the Coal Severance Tax monies be allocated to hire a half-time to full-time position at the Tamarack and Broad Valley Federations to search the collections of both the University of Montana and Montana State University libraries. This person is not meant to supplement or replace an ILL position at either university library. Rather, this position would facilitate public library access, for ILL requests from all federations, special and school libraries, and the State Library to the large and complementary collections of these two libraries. In addition to locating materials in the university library, this person would assist university ILL staff in processing the material to complete the loan.

A fiction pool exists at the Parmly Billings library, to which public libraries are expected to send their weeded fiction copies that are in good condition. A similar kind of pool might be created for nonfiction items. Such a nonfiction pool might be established at one library, such as the Lewis & Clark Library, or selected federation headquarters libraries might "volunteer" to house a portion of the nonfiction pool for a certain Dewey group. Regardless of the option chosen, the creation of a nonfiction pool deserves serious consideration and a decision should be reached in the near future. Both the fiction pool at Billings and the potential nonfiction pool, should have their bibliographic records ultimately entered into a MONCAT on a selective basis - as used to meet either ILL demand or an internal library demand. Items now entered into the Parmly Billings circulation system should also be entered into the WLN system. Experience has shown that when the holdings of a pool or seldom used collection (often storage collections) are known and available, then use of these materials is greater.

Academic libraries send their ILL requests directly to PNBC; special libraries send their requests to the Montana State Library; and school libraries use their local

public library; as suggested by the ILL protocols, since their requests do not match known Montana resources. Yet, based on the ILL survey, about 67% of the academic library ILL requests could be filled by the university and federation headquarters libraries in Montana. Thus, it is recommended that all academic, special and school ILL requests should be routed to the appropriate federation headquarters library for searching. The academic, special and school libraries have collections with the potential to make a significant contribution for improved ILL services. The collections of these academic, special and school libraries must be considered during any retrospective conversion project. Also, it is understood that these academic, special and school libraries are not specifically mentioned in the Coal Severance Tax bill which provides funds for resource sharing in Montana. Thus, it is recommended that legislation be encouraged that would add these academic, special and school libraries as full member libraries of a federation. Obviously representation on the Federation Advisory Boards would need to be modified. This would do much to promote multi-type library cooperation in Montana.

Currently, in some Montana cities, cooperation between different types of libraries is high. Examples include Bozeman (Bozeman Public Library and the Montana State University); Missoula (the City-County Library of Missoula and the University of Montana); and Helena (the Lewis and Clark Library and the Montana State Library). The potential exists in other cities, e.g., Butte, Billings, Great Falls, and Havre, and multi-type cooperation is encouraged by the consultant.

Presently, about 46% of the Montana State Library's budget is provided from Library Services and Construction Act funds - federal funds. In the view of the consultant, entirely too many of the LSCA dollars are being used by the State Legislature

to provide funding for the Montana State Library. The Library Commission, the State Librarian, federation headquarters libraries, public libraries, trustees, Friends groups, academic, school and special libraries should become far more vocal and more effective concerning this issue. The extensive use of LSCA dollars for the daily operations of the State Library are preventing Montana libraries from developing and implementing projects, often with high start-up costs, that could reap handsome benefits for Montana libraries in terms of future cost avoidance and immediate improved services to patrons. The State Library should provide leadership for the development of a long range Montana Library Services Plan, part of which would include automation, and coordination of continuing education.

Montana libraries, especially public libraries, should become more service oriented and advertise existing services, such as ILL, widely. The need for a continuing public awareness campaign is great. For example, a sign could be placed at each exit of the library. The sign would ask, "Did you find what you were looking for? If not, check at the ____ desk and we would be pleased to get it for you." This will help remind patrons to ask for services. ILL helps library users realize there is a much larger resource base that they can draw on than just the actual collection in their local library. ILL brochures, such as developed by the Golden Plains Library Federation, could be improved and distributed at points other than the library. The brochures might include "first person" testimonials of "what ILL did for me." Being unaware of a service is a barrier to the accessibility of the information sought by the patron.

2. COMMUNICATIONS, NOW AND PROPOSED

Currently, the Montana resource sharing network utilizes a dial-up teletype

network with nine machines located in the six federation headquarters libraries, the State Library and the two university libraries. Costs for this service run about \$33,000 per year. Currently, a Governor's Telecommunications Advisory Council is preparing an assessment of the current and future telecommunication needs for the State of Montana. A report is expected in September 1981. Montana libraries must make sure that their needs are represented. While some of the options that this Advisory Council will be exploring are promising, only one short-term option offers much hope for libraries. Some of the possible short-term alternatives are briefly explored here. These include retaining the TWX system in its present or modified form, use of a telephone company service called Wide Area Telephone Service (WATS), use of the existing state data transmission network, and replacement of the TWX system with a control unit, printing terminal and modem. Lack of a service such as TYMNET in the larger Montana cities prevents consideration of "electronic mail" as a communication alternative. Other options to be explored by the Telecommunications Advisory Council, but not considered in the scope of this study, will include cable technology, a state broadband (voice and data) microwave transmission network and a number of other alternatives.

Teletype System (TWX). The advantages of a teletype system is that the receiver of the message is provided with a paper copy of the ILL request to use in searching the catalog to determine the availability of a specific item. In addition, as long as the machine is on, it does not require a person to receive messages. The disadvantage with this option, is that it only transmits data at 110 baud (about 30 seconds per page). Additionally, cost is a significant disadvantage since about \$23,000 of each year's TWX costs are for fixed costs - the rental of equipment and the "capacity for use" charges. This means that actual communication costs, ignoring the yearly fixed

costs, are about \$10,000 per year.

Wide Area Telephone Service (WATS). An incoming WATS line (a toll free 800 number) for telephone calls placed within Montana costs \$750 per month. Depending upon the number of lines involved, this may be a cost effective alternative to the use of TWX. However, this option requires two persons to communicate and each ILL request must be transcribed by hand. Thus, this option is not recommended for routine ILL work but could be an invaluable supplement to inter-library reference activities.

Use of the Existing State Data Transmission Network. Printing terminals would be placed in nine locations to partially replace the existing teletype system. Probably 2-3 TWX machines would need to be retained to allow libraries to communicate with PNBC and libraries outside the region. The printing terminals would need to be IBM or IBM compatible since the state data transmission network relies on an IBM supported communications protocol called SDLC. TWX and micro-minicomputers use a different synchronous communications protocol. There is an existing message switching capability which the libraries could use for ILL and other types of messages. Costs of the nine terminals are estimated to be \$3,000 each for a total \$27,000. Yearly communications costs for dedicated lines and modems are estimated to be about \$11,000. Thus, total first year costs for this option are about \$38,000. Continuing yearly costs are about \$11,000 for communications and \$3,780 per year for maintenance of the terminals for a total of about \$14,780.

Control Unit, Printing Terminal and Modem. Replacement of the TWX equipment in each of the nine sites with a control unit, printing terminal and modem is a promising option. This equipment will allow libraries to transmit interlibrary loan requests at a

1,200 baud rate (about 3 seconds per page), while retaining the advantages of the TWX equipment. This equipment would utilize regular telephone lines on a dial-up basis but savings are anticipated due to the higher telecommunication speeds. Rather than creating a paper tape to transmit the ILL requests as is done now on the TWX system, the ILL requests would be entered into the control unit (composed of a microcomputer and diskette data storage unit), following the prompts of the microcomputer. The data would be stored on diskette and transmitted to the receiving library at the appropriate time by the control unit over telephone lines. The receiving unit stores the data on diskette and the library may print out the requests on command. All necessary software would be provided by the vendor. At the option of the library, a switch selectable 300-1,200 baud modem could be purchased. This would allow the control unit to communicate with other teletype systems.

The terminals also could be used to gain access to online data bases, e.g., ORBIT, DIALOG and BRS, a service now only available for the federation headquarters libraries through the State Library. Montana Tech, MERDI, and MSU all have access to online data bases. In addition, the diskettes which are a part of the control unit - a microcomputer, may also be used for other library administrative activities, e.g., maintenance of mailing lists, annual reports, etc. The system might be used for a retrospective conversion project and the creation and maintenance of a local Human Services Directory. A system of this type is now being implemented in twenty-five Minnesota public libraries. Costs for the equipment are anticipated to be about \$4,500 per site for a total purchase price of \$40,500. An annual maintenance contract and the cost of supplies are estimated to be \$650/year/site for a total yearly maintenance cost of \$5,850. It is assumed that PNBC would acquire similar equipment. Total communication costs are estimated to be between \$4,000 and \$6,000 per year for all nine sites.

A summary of each of the four communication options may be found in Exhibit 10. Thus, it is recommended that the Resource Sharing Task Force and the State Library should prepare a Request for Proposal to purchase and install a control unit, printing terminal and modem in nine Montana sites as a replacement for the existing TWX equipment. In the future, depending upon the availability of funds, libraries with heavy ILL volumes should be considered as additional sites for communications equipment.

The recommended communications equipment should be purchased and not leased through the vendor. Asking a vendor to lease means you are asking the vendor to assume additional banking responsibilities - for which you pay a considerable amount. In lieu of a straight purchase, a favorable, short-term loan might be obtained from a local bank to allow purchase of the equipment.

3. THE MONTANA UNION CATALOG OF MONOGRAPHS - MONCAT

The attractiveness of bibliographic records in machine readable form is that a computer can easily manipulate them - sorting, updating, and integrating to produce a variety of products. Of note for this study is that a computer could produce a Montana Union Catalog of Monographs - MONCAT. MONCAT could also include non-print material, e.g., films, tapes, slides, film strips, etc. The major function of any union catalog is to provide location information. Additionally, a MONCAT would be used to assist in the verification of a ILL request. Since the MONCAT would be consulted on a low-volume regular basis, the best medium to provide the MONCAT would be microform - microfiche or roll film. Microfiche allows the data base to be distributed to a number of libraries at a nominal cost. A motor-driven COM reader

Exhibit 10: Comparison of the Communication Options

	<u>Teletype System</u>	<u>Wide Area Telephone System</u>	<u>Existing State Data Communicat- ion Network</u>	<u>Control Unit, Modem & Print- ing Terminal</u>
First Year Costs	-	\$81,000*	\$38,000**	\$52,350
Continuing Yearly Costs	\$33,000	\$81,000	\$14,780	\$11,850
Paper Copy	Yes	No	Yes	Yes
Person necessary to receive message	No	Yes	No	No
Communication speed	300 baud	Voice	2,400 - 9,600 baud	1,200 baud
Facilitate, enhance, and provide access to other library services	No	No	No	Yes

* 9 phones X \$750/month X 12 months

** Estimated for IBM compatible printing terminals. Communication cost component includes modems. Note that message transaction costs have not been included for both the first year costs and the continuing yearly costs. These message transaction costs, for CPU and disk storage charges, may range from 25¢ to \$1.00 per message.

may be appropriate for those libraries that would consult MONCAT more frequently, e.g., the federation headquarters libraries, the State Library and the university libraries. However, as the size and costs of producing a microform MONCAT increases over a 3-5 year time period, it is anticipated that online access to the MONCAT data base will become more cost effective.

How frequently should the MONCAT be produced? If the MONCAT is cumulated and produced more frequently than yearly, then some of the federation headquarters libraries will receive ILL requests for popular current titles which will likely be in circulation and costs for producing MONCAT will be higher. However, should the MONCAT be cumulated and distributed every 3 or 6 months, then obviously more current titles would be available. Use of supplements would mean two lookups for each search and this is discouraged. It is recommended that the MONCAT should be cumulated and issued once a year with no supplements.

Alternatively, depending upon the libraries with COM catalogs, the MONCAT might replace their existing COM catalogs used by their patrons. This would make the holdings of three public libraries available to their patrons which, almost inevitably, would increase the volume of ILL requests among these libraries. The State Law Library of Montana is not interested in this option. Research has shown that supplements are universally ignored by patrons and thus MONCAT would have to be cumulated 3-4 times a year. However, some or all of the funds now used by each of these libraries to produce their own COM catalog would be used to help defray the increased costs of producing a more frequently cumulated MONCAT. Serious consideration should be given towards using MONCAT in lieu of an individual library's COM catalog.

Regardless of the final choice of alternatives to prepare a MONCAT, all purchases with Coal Severance Tax funds, or LSCA funds to fill ILL requests, must be added to the MONCAT data base. In addition, titles purchased by federation headquarters libraries in prior years to fill ILL requests are prime candidates for a retrospective conversion project.

The completeness of the record to be included in a MONCAT is an important issue. The national and other regional standards for the communication of bibliographic information is the MARC record. While a case can be made for including less than full MARC data elements for public library automation activities, such is not the case for academic libraries. Since the MONCAT is going to be used both by academic and public libraries the goal ought to be full MARC records in the MONCAT. A full MARC data base is by far the safest avenue of action since it provides the broadest range of options for the future. If there is going to be more than one use of the MONCAT data base, a likely event, then a full MARC record data base is recommended. However, it is important to recognize that this goal can not be achieved with some of the alternatives which are examined in the next section.

In addition to the amount of MARC data elements to be included in the MONCAT, the issue of call numbers must be resolved. Is the MONCAT to display only Dewey call numbers, both Dewey and LC call numbers, the call number of the library first entering the title in the MONCAT, or the call number used by each library? The importance of call numbers is made clear by the following statement. "When the Illinois State Library microfilmed its card catalog and deposited it in 20 locations throughout the state it reduced staff cost for filling requests dramatically. When a borrowing library located an item it needed on the microfilm, the ILL Request form

included the call number, thus making it possible for clerical staff at the Illinois State Library to fill the request."³ Thus, the consultant recommends that call numbers for all locations be included in a MONCAT.

4. THE PACIFIC NORTHWEST BIBLIOGRAPHIC CENTER

The Pacific Northwest Bibliographic Center (PNBC) has served the libraries in the region for over 40 years. With the advent and continued expansion of automation over the last several years, especially with the development and expansion of WLN, the question of PNBC continuing to function as an ILL switching center is a serious one. PNBC is considering submitting a request for funds to foundations to convert a portion of their most recent union catalog entries to the WLN system. For the next ten years or so, PNBC is likely to continue to play an important role as an ILL backup service. Montana libraries could first check with their federation headquarters libraries, a state union catalog, such as the contemplated MONCAT, WLN (either online or by purchasing the WLN Resource Directory), and finally turning to PNBC as a "location finder of the last resort."

An analysis of a sample from the Regional Union Catalog located at the Bibliographical Center for Research in Denver found that about two-thirds of their titles could be located on the OCLC system and about two-thirds of the titles not found in OCLC could be located in the National Union Catalog.⁴ However, only about twenty percent of their titles in either OCLC or the National Union Catalog could be found with Regional Union Catalog locations. When examining a sample of BCR ILL requests, the number of Regional Union Catalog locations found in OCLC and the National Union Catalog declined even further. Thus, it is evident that the BCR

Regional Union Catalog and, by implication, PNBC will continue to play a role as an ILL switching center. However, the extent of this role will change as automation activities become more prevalent in the Pacific Northwest.

Thus, Montana should proceed with the development of MONCAT with the goal that all libraries should be able to contribute records of their holdings in machine readable form. MONCAT should link to a bibliographic utility with regional and national ties. Montana cannot continue to depend upon a costly ILL service, PNBC, which portends even greater costs in the future while providing Montana libraries with diminishing ILL services.

III. THE ALTERNATIVES FOR CREATING A MONTANA UNION CATALOG

This section of the report will carefully examine each of eight alternatives which would improve resource sharing in general, and the current interlibrary loan system in particular. Each alternative for creating a Montana Union Catalog will be described, the costs and benefits identified, changes in ILL protocols required by the alternative will be recommended, and any resulting issues that must be resolved are identified. In addition, ongoing maintenance of the alternative will be reviewed along with possible retrospective conversion to machine-readable form of selected collections, when applicable.

In this section cost estimates are provided. Every attempt has been made to make these estimates accurate, or to error on estimating high. Prices quoted by vendors should be lower in response to a Request for Proposal.

The eight alternatives include:

1. Use of WLN at all six federation headquarters libraries, the State Library, and the six units of the university system.
2. Use of WLN in selected locations (two federation headquarters libraries, the State Library, and three university libraries).
3. Poor person's union catalog - microfilm existing card catalogs in four federation headquarters libraries (two have existing COM catalogs), the State Library, and two university libraries.
4. Merging of four existing COM catalogs.
5. Creating an in-state, minicomputer-based online ILL system.
6. Merging machine readable records of current acquisitions ordered from book jobbers.

7. Federation union card catalogs.
8. Using the recommended communication system to collect all unfilled ILL requests and then route to libraries on a pre-determined schedule - a "round robin".

ALTERNATIVE # 1: USE OF WLN AT ALL SIX FEDERATION LIBRARIES, THE STATE LIBRARY, AND THE SIX UNITS OF THE UNIVERSITY SYSTEM.

Creation of a Montana Union Catalog

Description. WLN terminals, CRT terminals linked to the Washington Library Network - a bibliographic utility located in Washington, would be installed in the six federation headquarters libraries, the State Library, and the six University system libraries. The WLN system provides access to bibliographic records, both the records made available through the Library of Congress MARC distribution service, and the original cataloging contributed by all those libraries linked to the WLN system (currently some 61 libraries use the WLN system). When an item is received in the library, a search is made of the data base, currently more than 1,800,000 bibliographic records, and if found the library adds its own special symbol (called a holding symbol and its unique call number) to indicate ownership of the item. The result is that each library has fast and uniform cataloging, with less original cataloging needed, which is time consuming and expensive. Products such as labels, cards, and COM catalogs can be ordered through the system.

The Parmly Billings library is already a WLN member.

As the WLN system contains the locations or holding symbols of sixty-one libraries in the Pacific Northwest, this same WLN system is also being used for inquiry for interlibrary loan purposes among member libraries. Using the WLN system has

reduced the time it takes to verify an ILL request - to determine the correct author, title, and publisher of the desired item. In addition, subject access helps straighten out mixed up ILL requests. The identity of all libraries that own or "hold" the item is also displayed. Being an online participant of WLN allows a library to "go direct" and thus by-pass PNBC with its costs. In fact, PNBC has observed an average twenty percent reduction in the number of ILL monograph requests to PNBC for those libraries that are using the WLN system. For some libraries with WLN terminals, this reduction in the use of PNBC has been even greater. In addition, since ULMS is being added to the WLN data base, it will allow one place to check for both book and serial requests.

The service improvement for Montana ILL requests would be dramatic. When fully implemented, a single search at a WLN terminal would reveal all those libraries, including Montana libraries, that hold or own the ILL request. The service time to identify the owning library(s) and to route the request to the appropriate library would be a few minutes rather than the days or weeks it now takes through PNBC. In addition, WLN terminals would be used to assist in the selection of materials by reducing the amount of little-used duplicate materials and thus, allowing the purchase of additional titles. This would result in improved public services. The WLN system allows subject and keyword searching of the data base and each search is made to a data base that is current. All modifications to the data base are made online. However, the data base would not reflect holdings of libraries in the state not using the WLN system, e.g., libraries with COM catalogs or that use the OCLC system.

By virtue of being a WLN participant, Montana libraries with WLN terminals could expect to receive an increasing volume of ILL requests from libraries outside

Montana. This would be especially true as more of the older and unique titles are input into the WLN data base. This would counter the current situation in which Montana libraries are net borrowers in the Pacific Northwest region, because other libraries in the region do not know what materials are available in Montana libraries.

The resulting data base would be of the highest possible quality. This data base would allow multiple uses: creation of a microfiche Montana Union Catalog; creation of one or more federation or groups of federations (2-3) union catalogs for distribution to federation member libraries; replacing a library card catalog with either a computer output microform (COM) catalog or a computerized online catalog; and, use of a library's title data base for an automated circulation control system.

It currently takes about 2-4 months to obtain the necessary terminals and complete the telephone line installation. The State Library could sign a "master contract" with WLN and pro rate the communications costs equally among all participating libraries so that all libraries are in effect "distance independent" from the WLN system.

Costs. This option is clearly the most expensive of all the alternatives. Exhibit 11 identifies the cost for the six federation libraries, the State Library, and the six university and college libraries. Total first year costs are \$204,626 and continuing costs for the next year are estimated at \$125,410.

It should be noted that these are not the total WLN costs. Should a library wish to have catalog cards or a COM catalog, a likely event, then there are additional costs which appropriately belong to the library placing the order for the products. A

Exhibit 11: Alternative # 1. Summary of Costs - All Libraries with WLN Terminals

	<u>New Titles Cataloged Per Year</u>	<u># WLN Terminals</u>	<u>Start-up Costs</u>	<u>Bib. Recurring Charges- General</u>	<u>System- Online Charges</u>	<u>Total First Yr. Costs</u>
Bozeman Public Library	2,165	1	\$6,804	\$2,940	\$3,495	\$13,239
Glasgow Public Library	2,001	1	6,804	2,940	3,234	12,978
Great Falls Public Library	4,297	1	6,804	2,940	6,937	16,681
Miles City Public Library	1,396	1	6,804	2,940	2,271	12,015
Parmly Billings Library	6,802	2	NA	5,880	10,892	16,772
City-County of Missoula Library	5,837	1	6,804	2,940	10,225	19,969
Montana State Library	2,417	1	6,804	2,940	4,916	14,660
University of Montana	4,601	2	10,854	5,880	7,391	24,125
Montana State University	5,503	2	10,854	5,880	8,825	25,559
Montana Tech	686	1	6,804	2,940	1,162	10,906
Northern Montana College	1,000	1	6,804	2,940	1,616	11,360
Eastern Montana College	3,449	1	6,804	2,940	5,587	15,331
Western Montana College	<u>778</u>	<u>1</u>	<u>6,804</u>	<u>2,940</u>	<u>1,287</u>	<u>11,031</u>
Totals	40,932	16	\$89,748	\$47,040	\$67,838	\$204,626

TOTAL FIRST YEAR COSTS = \$204,626

TOTAL CONTINUING COSTS = \$114,009

X 10% = LIKELY TOTAL SECOND YEAR COSTS = \$125,410

card set (5 cards) for a title costs 28¢. A COM catalog costs 4¢/title plus 12¢ per sheet of microform with a minimum charge of \$750 per run for COM catalogs with less than 18,000 titles.

In addition, this estimated total cost does not include any costs for a retrospective conversion project. Assuming a first year project to batch input 100,000 records, the WLN costs for this project would be about \$10,000. The retrospective conversion process will be explained later.

The cost for WLN to produce the first Montana Union Catalog would be about \$10,000. This catalog would be produced yearly and would include about 50,000 titles from current acquisitions, the 70,000 titles in the Billings COM catalog, 58,000 titles in the Lewis and Clark COM catalog, 5,000 titles of the State Law Library of Montana COM catalog, and the 38,000 titles in the Missoula COM catalog. Costs for the second and succeeding years would depend upon the number of unique titles in the Montana Union Catalog data base and the amount of effort put into a retrospective conversion project.

Obviously the six federation headquarters libraries could also input the holdings of their member libraries. Such an approach would require some additional WLN terminals and dollars. Thus, this approach was not considered further. In the consultant's view it is unfortunate that WLN does not have a two or three stage pricing schedule to accommodate the needs of small, medium and large libraries. The cost of communications with WLN might decrease by 50% should a federal library in Montana be a part of the WLN system. The federal library and hence all Montana libraries, using the same dedicated line, would qualify for federal government GSA telecommunication rates, if a dedicated line were available for library purposes.

Benefits. Due to the fact that so many libraries would be using the same bibliographic utility - WLN - standardization would be introduced in the State of Montana. This would facilitate not only the creation of a Montana Union Catalog of Monographs but would allow an individual library or a group of libraries to use the data base for a variety of purposes. This should lead to a more productive library and, hence, improved services to the library's patrons.

During several interviews, the question was raised, "How important is the quality of the data base?" Having a "clean" or high quality data base may be crucial depending upon the goals of the Montana libraries. It is relatively straight-forward to go from a high quality data base, such as WLN's, down to shorter length records for a circulation control system or to produce other specialized products, e.g., printing "selective dissemination of information" alerts or reports for some patrons, to prepare an analysis of collection development activities within the state, etc. However, it is much more difficult and costly, both in terms of time and money, to take a "dirty" record and try to move it up to a cleaner or high quality record. The Parmly Billings, Lewis & Clark and the City-County of Missoula libraries provide an example. All three libraries have COM catalogs, each maintained and produced by separate vendors. While a tape of their data bases can be given to WLN, WLN can not simply load that data base. Rather, WLN must prepare a batch retrospective search record to search the WLN data base. All search records will not yield a WLN record and so each library will have to modify those machine readable records for which records were not found in the WLN data base. The Parmly Billings Library is in the process of having their Autographics full MARC records added to the WLN data base.

One reason for the high quality of WLN's data base is that every record is

linked to an authority control file. This authority control file maintains the correct entry for authors, corporate authors, and subject headings along with the corresponding SEE, SEE ALSO, SEE FROM, SEE ALSO FROM cross references and any scope notes. In addition, every new record is manually reviewed by someone at the Washington State Library to ensure accuracy and adherence to cataloging standards.

As all the libraries with WLN terminals get into and complete a retrospective conversion project, the need for PNBC to provide holdings location data will continue to decline. The decrease in PNBC reliance will be most noticeable when retrospective conversion has been completed. Once finished, it is estimated that about 50% of Montana's ILL requests would be found in the WLN data base with Montana holding symbols (a potential savings of \$33,000 per year in PNBC fees). In addition, access to the WLN data base with holdings of 60 other libraries in the region will further reduce the need to go to PNBC by about 16% for a potential savings of \$10,550. Rather than sending ILL requests directly to PNBC the federation headquarters library will be able to do an inquiry on the WLN terminal to determine the holding library(s), if any. If none are found, the ILL request is routed to PNBC with the notation that no holdings were located on the WLN data base. An obvious challenge for PNBC is to ensure that their unit costs do not increase and thus offset these potential savings.

At the present time WLN does not have in operation an ILL module which would provide immediate transmittal of the message from the requesting library to the loaning library, such as is now available on the OCLC system. Lack of grant funds to develop this module seems to be the impediment although WLN may have an operational ILL communications module by the Fall of 1981. Thus, the new recommended communications system would be implemented and used in Montana.

Changes in ILL Protocols. Under this alternative, the ILL requests not filled at the federation headquarters library would immediately be searched on the WLN terminal (assuming a retrospective conversion project for each library has been completed). Libraries would try and fill the request from Montana holding libraries prior to sending the ILL request to another library in the region directly. If not found on the WLN terminal, the ILL request would be forwarded on to PNBC.

Ongoing Maintenance of the Union Catalog

As required by the contract between WLN and the participating Montana libraries, all current acquisitions must be entered into the WLN data base. Each year, WLN would produce a microfiche MONCAT. Obviously, this union catalog would be enhanced by the larger libraries and those libraries with special unique collections engaging in a retrospective conversion project in order to increase the number of titles in the Montana Union Catalog of Monographs - MONCAT.

Retrospective Conversion

The batch retrospective conversion facility of WLN could be available whether or not a library has a WLN terminal. If not online, the library may send a "recon" search record to WLN on tape or punched card following a prescribed format. Alternatively, a federation headquarters library could enter the data for another library. Currently, WLN charges .06¢ for every record that is found and .01¢ for every record not found. Given the more than 1,800,000 bibliographic records in the WLN data base, WLN has estimated an average find rate or "hit" rate of 70% for all libraries.

Issues

The issue of compensation for net lenders that are not federation headquarters

libraries arises in this alternative. Lewis and Clark library in Helena has a large machine readable file used to produce it's COM catalog. If this is included in the Montana Union Catalog, as it should be, then this library is likely to become a net lender and yet not have any compensation or derive some of the benefits of being a federation headquarters library. It would seem there are two options to solve this problem: 1) develop a compensation procedure, using Coal Severance Tax monies, to reimburse the net lenders within the state that are not federation headquarters libraries. This should apply to other libraries in addition to the Lewis and Clark Library; and, 2) perhaps split up the Broad Valleys Federation into two federations so that Lewis and Clark Library becomes a headquarters with 5-6 counties and Bozeman Public Library retains the other counties. This second solution is not recommended to solve the compensation for net lenders issue, however, since other libraries throughout the state either are or could develop strong collections in their own right and thus also become a potential net lender, e.g., Kalispell.

ALTERNATIVE # 2: USE OF WLN IN SELECTED LOCATIONS (TWO FEDERATION LIBRARIES, THE STATE LIBRARY AND THREE UNIVERSITY LIBRARIES)

Creation of a Montana Union Catalog

Description. WLN terminals would be installed in two federation headquarters libraries, the State Library, and three university libraries (U of M, MSU and Montana Tech). The two federation headquarters libraries recommended for installation include the existing WLN terminals at Parmly Billings Library, and the City-County Library of Missoula. The other federation libraries would send their unfilled ILL requests to a designated ILL center - one western and one eastern within the state of Montana, so that the ILL request could be searched (Broad Valley and Pathfinder Federation requests

would go to the Tamarack Federation; Golden Plains and Sagebrush Federation requests go to the South Central Federation). If found, the request would be forwarded to the owning library, if not found, the request would be sent to PNBC.

The City-County Library of Missoula is recommended to receive WLN terminals since: 1) they have partially completed a retrospective conversion project, 37,000 records, that could be readily entered into the WLN data base; 2) with this head start, Missoula would complete a retrospective conversion project in a relatively short period of time; 3) Missoula is an existing Montana ILL resource center; and 4) Missoula has a trained staff for machine readable data input.

Obviously, those libraries with WLN terminals would enter their current acquisitions into the WLN data base. Federation libraries without WLN terminals could contract with another federation headquarters library that has a WLN terminal to enter their current holdings, but costs for this has not been included in the cost analysis. Each year WLN would produce a microfiche Montana Union Catalog of Monographs. With a copy of MONCAT, a federation headquarters library could determine the holdings of other Montana libraries and route the ILL request directly to the holding library without going to the ILL regional center.

Costs. The costs for this option are clearly more attractive in terms of total expenditures as shown in Exhibit 12. Total first year costs are about \$111,991 and continuing costs are about \$79,136. Again, these cost estimates do not include the price for products, i.e., catalog cards, labels, or COM catalogs for individual libraries, and retrospective conversion costs are not included.

Exhibit 12: Alternative # 2. Summary of Costs - Selected Libraries with WLN Terminals

	<u>New Titles Cataloged Per Year</u>	<u># WLN Terminals</u>	<u>Start-up Costs</u>	<u>Bib. Recurring Charges- General</u>	<u>System- Online Charges</u>	<u>Total First Yr. Costs</u>
Parmly Billings Library	6,802	2	NA	\$5,880	\$10,892	\$16,772
City-County of Missoula Library	5,837	1	\$6,804	2,940	10,225	19,969
Montana State Library	2,417	1	6,804	2,940	4,916	14,660
University of Montana	4,601	2	10,854	5,880	7,391	24,125
Montana State University	5,503	2	10,854	5,880	8,825	25,559
Montana Tech	<u>686</u>	<u>1</u>	<u>6,804</u>	<u>2,940</u>	<u>1,162</u>	<u>10,906</u>
Totals	25,846	9	\$42,120	\$26,460	\$43,411	\$111,991
Plus Cost of Adding Four COM Catalogs						10,000

TOTAL FIRST YEAR COSTS = \$121,991

TOTAL CONTINUING COSTS = \$71,942

X 10% = LIKELY TOTAL SECOND YEAR COSTS = \$79,136

66

65

The costs for WLN to produce the first year's Montana Union Catalog would be about \$10,000. It would contain current acquisitions of the six federation headquarters libraries, the State Library, and the three university libraries and the data from the four COM catalogs.

Benefits. The benefits of this alternative would be almost the same as the first alternative. A very high quality data base would result. This data base would produce the Montana Union Catalog of Monographs - MONCAT and other products as deemed necessary by Montana libraries. The impact on PNBC would be reducing the number of Montanan ILL requests by about 57%, which is the same as Alternative # 1. As some of the federation headquarters libraries would not have direct online access to the WLN data base, these libraries would have a slight delay in identifying the holding library(s), as they would be sending their requests to a Montanan ILL center for checking.

The availability of subject and keyword access to the WLN data base will assist in verifying "problem" ILL requests and more quickly and fully responding to subject ILL requests.

Again, due to a lack of a presently available WLN ILL module, the recommended communications network within the state of Montana would be needed.

Changes in ILL Protocols. ILL requests not filled at the federation headquarters libraries would be searched on the WLN terminal if the library had a WLN terminal. Otherwise, the library would search the Montana Union Catalog for holding libraries and if not found, send the ILL request to a Montanan ILL center (a federation

headquarters library with a WLN terminal). Here it would be searched online in the WLN data base and if not found, then routed to PNBC.

Ongoing Maintenance of the Union Catalog

All current acquisitions cataloging must be entered into the WLN data base by participating libraries. In addition, it is planned for this alternative that those federation headquarters libraries that do not have a WLN terminal would enter their current cataloging by one of two methods mentioned earlier. Each year, WLN would produce an updated and expanded edition of the Montana Union Catalog. A continuing retrospective conversion project would add additional titles to the Montana Union Catalog and make it a much more comprehensive, and hence, useful tool.

Retrospective Conversion

The process is exactly the same as was explained in Alternative #1.

Issues

As with the first alternative, the issue of what to do with a resource in the state that happens not to be in a Federation headquarters library emerges. Lewis & Clark Library has a data base used to produce their COM catalog. This data base ought to be included in a MONCAT. Yet, without compensation for net lenders, non-federation headquarters libraries will have no incentives to provide quality ILL services. Thus, it is recommended that a formula for compensating net ILL lenders be developed.

ALTERNATIVE # 3: POOR PERSON'S UNION CATALOG - MICROFILM EXISTING CARD CATALOGS IN FOUR FEDERATION HEADQUARTERS LIBRARIES, THE STATE LIBRARY, AND TWO UNIVERSITY LIBRARIES

Creation of a Montana Union Catalog

Description. Under this option, the existing card catalogs of seven libraries are microfilmed and copies are distributed to all federation headquarters libraries, the State Library, and two university libraries. Copies of the Parmly Billings Library and the City-County of Missoula Library, Lewis & Clark Library and the State Law Library of Montana COM catalogs would also be distributed. At the time the card catalogs are filmed the catalogs in effect become "closed" - and cannot be a current ILL tool. The State would prepare a request for proposal document which would outline the size of the card catalogs to be filmed and their locations and ask for a response from several microfilming companies in the Pacific Northwest. For the cost analysis of this alternative, the consultant contacted two companies and provided preliminary information in order to obtain some cost estimates. It should be noted that each of the two companies employs a different approach to the project which results in a markedly different quality of the final products. It was assumed that author, title and subject (if available) catalogs would be filmed. Time to film the catalogs and deliver the finished product is expected to take about 6 months.

Copies of these individual microfiche catalogs would be provided to the six federation headquarters libraries, the state library, and the two university libraries. If a request could not be filled at the federation headquarters library, it would be expected that the microfiche catalogs of all the other federation headquarters libraries would be checked for holdings. In addition, the holdings of the State Library and the two university libraries would also be reviewed. After all Montana microfiche catalogs had been individually checked (there is no way to inter-file separate microfiche catalogs), a time consuming process, then a library could forward an unfilled ILL request to

PNBC.

This approach means that there are no machine readable records of Montana holdings. This makes maintenance of a MONCAT difficult at best.

There would be considerably more borrowing between federation headquarters libraries to meet ILL request demands, a potential 57% reduction in use of PNBC, but Montana would still remain a regional net borrower of ILL materials.

Costs. The costs for this alternative vary from \$125,000 to \$191,000. In addition, the ILL librarians and clerks that currently handle the ILL requests could expect that they would spend a fair amount of time checking each request. In some cases, this may mean hiring an additional half-time or full-time person to assist in the searching of the nine individual microfiche catalogs.

Benefits. One obvious benefit is that each individual library will have a microfilmed copy of its catalog that could be locked up in a vault for insurance purposes. It also means that the available resources in other Montana libraries, some currently unknown, would be known and thus available for interlibrary loan. Using this approach, it can be anticipated that this alternative would reduce the number of ILL requests sent to PNBC by about 8,949 requests. At \$4.46 per request, this amounts to a \$39,912 reduction in the annual Montana PNBC bill. It also means that the service time of identifying holding libraries would be reduced slightly since the request would have the call number included - reducing the retrieval time at the loaning library. However, these benefits are probably offset by increased staff costs for searching the separate microfiche catalogs.

Changes in ILL Protocols. ILL requests not filled at the federation headquarters libraries would be individually searched in the other federation and State Library microfiche catalogs. The two university library microfiche catalogs would not be searched unless the ILL librarian or clerk felt there was a good chance of finding the material. Each of the two university libraries would search the other University's microfiche catalog. Unsuccessful searches could be checked in the WLN Resource Directory and, if still not found, sent on to PNBC.

Ongoing Maintenance of the Union Catalog

There are two options for maintaining a "poor person's union catalog". First, all libraries that have their catalogs filmed could have them re-filmed on a regular basis. It would take a sample of ILL transactions to determine the best re-filming schedule but for purposes of this analysis let's assume every four (4) years. Thus, Montana could expect to pay another \$200,000 in four years time for another "closing" of the card catalog in four of the federation libraries, the State Library, and two university libraries. The second approach would be to use either WLN terminals or to obtain machine readable records from book jobbers in order to create a MONCAT that could be easily and economically updated on a regular basis.

Retrospective Conversion.

There is no retrospective conversion since the "poor person's union catalog" is simply the entire separate catalogs of the seven libraries whose card catalogs were filmed. Conceivably the microfiche catalog of a library's collection could be used to aid in a retrospective conversion project but this would only be one step in a complex operation and is not recommended.

ALTERNATIVE # 4: MERGING OF FOUR EXISTING COM CATALOGS.

Creation of a Montana Union Catalog

Description. Four libraries in the state have existing COM catalogs, each supplied by a different vendor. Parmly Billings Library is having its COM catalog produced by WLN. City-County of Missoula Library's COM catalog is made by Blackwell North America with MARC or MARC-like records. The Lewis & Clark Library in Helena, a non-federation headquarters library has its COM catalog produced by Brodart. And, the State Law Library is switching its COM catalog from BNA to OCLC (Brodart). These four data bases in machine readable form would be merged, duplicate records identified and eliminated by adding holdings symbols, to create the Montana Union Catalog - MONCAT. Under this option, other libraries with data in machine readable form, e.g., Carroll College which has OCLC and perhaps the University of Montana which has its own, short record, acquisitions system could also input records into the Montana Union Catalog. While this option uses a computer, it is on a scheduled batch mode basis.

Copies of the Montana Union Catalog would be provided to the six federation headquarters libraries, the State Library, and the university system libraries. Other libraries desiring to obtain a copy of the Montana Union Catalog could certainly have one but most federation member libraries should, and certainly do, rely on their headquarters library as a resource to tap first.

The State Library would prepare a Request for Proposal to be sent to a number of vendors. One potential vendor might be the State Data Processing Department.

Other vendors include Brodart, Baker and Taylor, Autographics, BNA and WLN to name a few. Some of these vendors have authority control files and others do not. Thus, the resulting product may be quite good to unacceptable (unacceptable is defined as having several duplicate entries for the same title). It should be noted that unless a library is a WLN member, WLN will not produce a microform catalog, on a continuing basis at the present time. WLN will merge the machine readable records of a non-member into the WLN data base on a one-time only basis.

Potential issues to be resolved and the information included in any RFP include : the number of titles in each COM catalog; the total number of unique titles in the data base (it is recommended that a sample be taken from each catalog to determine the number of duplicate and unique titles); the vendor and file specifications for each COM catalog; asking each vendor to identify the specific methods they use to identify duplicate records; actual data stored in the vendor's system (full MARC or a MARC subset); the reduction ratio desired in the resulting microform Montana Union Catalog (a nominal reduction ratio of 42X is recommended); the number of copies required for both microfiche and roll film; the timing of the production of the Montana Union Catalog; whether an individual library, and/or 2 or more libraries want separate COM catalogs in addition to the MONCAT; how frequently is the MONCAT to be cumulated; potential additional sources of data (WLN, Baker & Taylor, Brodart, OCLC, Academic Book Center); ability to pull out the data pertaining to one library or a group of libraries; etc.

Given the variability in terms of the quality of the data base for these existing COM catalogs, the resulting MONCAT will only be as good as the poorest data base. Thus, a minimum set of standards should be established in order to allow a library to

input machine readable data into the MONCAT.

Costs. The costs of merging the four existing COM catalogs would be about \$11,000 assuming 110,000 titles in the MONCAT and 25 microform copies of the MONCAT are provided by the vendor. Additional costs are incurred for producing the COM catalog. Thus, the total cost for producing the first microform edition of the MONCAT would be about \$18,000.

Benefits. The advantage of this alternative is that a MONCAT could be produced in a relatively short period of time, 6-8 months after a contract is signed. The obvious disadvantage with this option is that only the holdings of three public libraries and the State Law Library would initially be included in the MONCAT. About 30% of the ILL requests (see Appendix A less duplicate holdings) could potentially be filled by these four libraries for an annual savings of \$19,800 of the current payment to PNBC. These four libraries, however, would likely become significant net lenders until additional libraries were added to the MONCAT.

Changes in ILL Protocols. Assuming the ILL request remains unfilled at the federation headquarters library, the MONCAT would be searched and if found the ILL request would be forwarded to the appropriate library. If not found, the ILL request would be sent to PNBC.

The existing exceptions to the ILL protocols would be maintained, i.e., fiction requests to Billings, children's material to City-County of Missoula, and unverified requests, subject requests and state & federal documents requests to the State Library.

Issues. The issue of compensation for a non-federation headquarters library is present in this alternative.

Ongoing Maintenance of the Union Catalog

In order to make this alternative more economically attractive more libraries must be able to add their current holdings to the MONCAT data base so that the base of support of the MONCAT is broadened in terms of the number of libraries that are inputting data regularly into the MONCAT. Obviously the more libraries that are represented in the MONCAT the greater the distribution among the resource sharing participants - both lending and borrowing. Almost all vendors accept input in a variety of forms including magnetic tapes of records from book jobbers, from punched card or magnetic tape produced locally to prescribed formats, optical character recognition (OCR) typed input forms produced by each library, microcomputer leased from a vendor, contract with the vendor to do the input, etc. Each option has it's own advantages, disadvantages and costs.

For this alternative to succeed there must be a clear and firm commitment on the part of specific libraries that a MONCAT is important and that they will make a concerted and fiscal effort to support the maintenance of the MONCAT by inputting records. The State Library and the Library Commission can support this effort perhaps by offering a fiscal inducement, such as a subsidy from the Coal Severance Tax or LSCA funds. In other states, this subsidy has taken the form of a specific amount awarded to each library for each record input into the MONCAT.

Retrospective Conversion

Again, the more records that are added to the MONCAT to build upon the four

merged COM catalogs, the greater the utility a MONCAT will have as an ILL tool. A number of vendors have large data bases which can be searched with a short search key, e.g., LC card number, author's last name, and the first 15 characters of the title. The methods for accomplishing this are the same as was described above in "Ongoing Maintenance of the Union Catalog."

Again, fiscal support from the State Library for such an activity clearly demonstrates the statewide importance of creating a large (in terms of the number of titles) and useful tool such as the MONCAT.

ALTERNATIVE # 5: CREATING AN IN-STATE, MINICOMPUTER-BASED ONLINE ILL SYSTEM

Creation of a Montana Union Catalog

Description. Initially, this alternative was to consider linking automated circulation systems as a means of improving ILL services in the state. Currently, there are two automated circulation systems in the state of Montana. Both systems are made by CL Systems Inc and they are located at the Parmly Billings Library and the Lewis & Clark Library in Helena. Other libraries in the state would be encouraged, perhaps through the use of a subsidy, to install additional automated circulation control systems. These circulation systems automatically check in and out items from the library, identify items being checked in that are on "hold" for another patron, calculate fines, automatically produce overdue notices, and identify delinquent patrons. While beyond the scope of this study, this possibility should be thoroughly explored since it would provide lower costs and improved circulation services, especially for the public libraries.

In fact, a shared multi-type library regional circulation system would provide the greatest benefits for the participating libraries and the resulting data base could easily be added to a MONCAT.

The State Data Processing Coordinator in the Office of Budget and Program Planning expressed an interest in establishing regional circulation control systems on either existing or new PDP 11/70 minicomputers. If the automated circulation control system is shared with other non-library users, then issues such as priority and hours the system will be available to the library must be addressed.

As a first step, the two existing automated circulation control systems would be linked via telephone lines and thus each library would be able to inquire, using a CRT terminal, into the data base of the other library as to the availability of a particular item to satisfy an ILL request. However, this particular option is not recommended due to: 1) the high telecommunication costs which would only increase as additional circulation control systems were installed elsewhere in the state, 2) the low volume of ILL requests does not justify this high technology solution, and 3) the quality of the circulation system data base is considerably poorer than that of other data bases, and the records are of an abbreviated nature. Currently, the Parmly Billings Library enters into its circulation system all those ILL requests which are filled from the fiction pool. It is recommended that these titles be entered into the WLN cataloging system since the WLN data base is much more likely to be used in the creation of a Montana Union Catalog.

Should a library have an automated circulation control system and not a COM catalog, it still would be possible for that library to provide data for the MONCAT,

provided their computer system or their vendor had a magnetic tape drive and the software to put onto magnetic tape the bibliographic information of all titles added and deleted during the past year.

Another possibility, and the alternative being considered in this analysis, is to utilize a minicomputer-based circulation system for an online MONCAT and ILL network. Under this option, the computer system would be centrally located, such as at the State Library. The data bases in machine readable form would be obtained from a variety of sources, COM catalogs, book jobbers, circulation systems, WLN and OCLC, etc. All of these data bases would be loaded into this central computer system (duplicate titles would be identified and removed by adding holding symbols). CRT terminals would be placed in each of the federation headquarters libraries, the State Library and the six university system libraries. Terminals could also be placed in other selected libraries which have strong collections in their own right and which have a large ILL volume - both loans and borrowing. In addition to the circulation system components, which the State Library might utilize, and the inquiry functions (author, title, subject) which all libraries with terminals would use, the system could be modified to provide an ILL message switching capability - sending a message from one terminal to another. The periods of time currently spent waiting for an ILL request to be filled would be substantially reduced. One potential pitfall or difficulty with this option is that the terminals must be IBM compatible to utilize the state's data communication lines.

The in-state, minicomputer-based online ILL system is really an online MONCAT - an alternative to a microfiche MONCAT. While it is true that it would be possible to input original cataloging into the online MONCAT, it still would require cataloging

records from another source, such as WLN or the book jobbers.

The minicomputer-based system would allow a library to add, delete and modify records in an online environment. As the MONCAT data base grows in size, this feature will improve the utility of the MARC data base. Updating a large data base in a batch mode becomes cumbersome and generates a number of problems.

Costs. The cost of purchasing a new minicomputer with about 20 terminals (six federations, six university system libraries, the State Library and a few other selected libraries with a large ILL volume could have terminals) and the necessary disk capacity for 1,500,000 titles would be between \$300,000-\$375,000. Obviously costs would be less if an existing minicomputer could be used. Another cost reducing possibility would be to utilize the State's large mainframe computers in Helena. Software being developed by the University of California, Division of Library Automation will provide online access and an ILL communications module to a union catalog. Software costs for an automated circulation system would be about \$45,000. Additional costs for software development for an ILL message switching capability would be about \$15,000. Maintenance costs for hardware would be between \$1,800-\$2,500 per month and software maintenance would be about \$1,000 per month. Communication costs would be about \$11,000 per year. In addition, a staff person would be needed to supervise the operation of the system - costs about \$18,000 per year. Thus, total first year costs for this alternative would be about \$453,000 and continuing yearly costs would be \$71,000.

Benefits. The benefits of a minicomputer-based online MONCAT system are substantial. The increased ability to verify and locate Montana holdings would be significant. In addition, the system would automatically route ILL requests to the desired library,

thus eliminating the majority of the ILL paper flow with its attendant costs and time delays, and the borrowing library would be able to respond as to the actual availability of the item. With this option, the PNBC bill would be reduced by about \$37,600 based on finding 57% of the ILL requests in the online data base.

Another benefit for an online system is that the minicomputer could automatically keep track of the ILL transactions and produce all necessary statistics and automatic status checks on ILL requests more than X days old. The CRT terminals could also be used to gain access to the online data bases found on the DIALOG, ORBIT, and BRS systems.

Changes in ILL Protocols. Under this alternative, ILL requests not filled at the federation headquarters libraries would be searched on the online MONCAT. Assuming the ILL request was located in Montana, the ILL request would be transmitted automatically by the computer system to the lending library. If not found, the ILL request would be searched in the WLN data base. If not found, the request would be forwarded to PNBC.

Ongoing Maintenance of the Union Catalog

Data would be received from a variety of sources, e.g., book jobbers, WLN or OCLC, circulation systems, etc. on a fairly regular basis. The agency responsible for the operation of the central computer would load this data into the MONCAT. In addition, selected libraries with terminals could, on a scheduled basis, enter their data directly into the automated system, either adding holdings symbols for titles already in the MONCAT data base or entering entirely new titles, following the prompts provided by the computer system.

Retrospective Conversion

Obviously, a MONCAT will increase in value as an ILL tool as the number of titles in it increase. Thus, a retrospective conversion project should be given high priority. Several different approaches can be taken as was discussed in Alternative # 4. This alternative allows retrospective conversion projects to proceed independently, but hopefully coordinated, and then have the resulting machine readable data bases merged into the MONCAT.

ALTERNATIVE # 6: MERGING MACHINE READABLE RECORDS OF CURRENT ACQUISITIONS ORDERED FROM BOOK JOBBERS.

Creation of a Montana Union Catalog

Description. This alternative is a very exciting one since it potentially allows almost every library to participate in the MONCAT. Almost all public libraries and the academic libraries utilize book jobbers. After an appropriate contract has been signed with all the necessary book jobbers, they will prepare a monthly or quarterly magnetic tape of machine readable records for all those titles ordered by each library (the vendor would probably prepare one tape for all Montana libraries). These tapes would be gathered by the State Library, or alternatively sent directly to the vendor that will prepare the microfiche MONCAT. All the records will be merged, duplicate titles eliminated, and the MONCAT produced on a yearly basis. Another option would be to identify a number of libraries, e.g., the State Library, the six University system libraries, selected academic, special and school libraries, and some 10-20 public libraries (including the federation headquarters libraries) as the only libraries to have their current acquisitions to be entered into the MONCAT. Philosophically the consultant

prefers the former approach, including all libraries, because it begins to share some of the costs of ILL among all libraries and more importantly, it shares some significant resources that will remain untapped unless this approach is taken. In addition, this approach would allow some libraries now lacking a catalog to create, over time, a COM catalog.

The state, of course, would have to prepare specifications in the form of a Request for Proposal to be sent to a number of vendors. The vendors would be asked to merge the machine readable records from a number of sources and create and maintain the MONCAT. The MONCAT would reflect some inaccuracies, titles returned to a book jobber, etc., and would not be 100% complete - probably would be between 95%-99.5% complete.

Costs. Cost for this service would appear to be fairly reasonable. Baker and Taylor charges 15¢ per MARC record and \$25 per tape, produced monthly, with a \$10 rebate for every tape that is returned. Assuming that 90% of the titles ordered by public libraries (66,886 titles) are ordered through B&T, that would mean about 60,000 titles per year are obtained from B&T (assuming 40,000 unique titles). Thus, the costs for ordering MARC records from B&T would be about \$6,500 (about \$2,500 for the six federation headquarters libraries). In fact, these costs might be somewhat less since four of the libraries in Montana already have machine readable data bases. Costs for the other book jobbers include: Brodart's Machine Readable Bibliographic Data service is 20¢ per record and Academic Book Center will charge between \$20-\$40 per quarter regardless of the number of ABC acquisition records on the tape (MARC records will cost \$?). Thus, the total costs for obtaining MARC records of current acquisitions is about \$10,000. In addition to obtaining the machine readable records, the records

must be merged to produce the MONCAT. Costs for this are estimated to be about \$30,000. The microform MONCAT would reflect the merged COM catalog data base plus one year's current acquisitions from all libraries. Thus, the total costs for this alternative would be about \$40,000.

Benefits. This alternative would combine the existing machine readable data bases of about 168,000 titles (Lewis & Clark, Parmly Billings, City-County Library of Missoula, and the State Law Library COM catalogs and Carroll College's OCLC records) with the current acquisitions of all public libraries (about 66,886 titles per year) and the State Library, special libraries, and six university system libraries (about 10,100 titles per year). Based on the results of the survey, it can be anticipated that about 40% of the ILL requests that currently are sent to PNBC could be avoided for a potential first year savings of \$26,400. The second and succeeding years, the percent of ILL requests found in MONCAT would increase and, hence, PNBC savings would also increase. It should be noted that of the 66,886 titles ordered each year by public libraries, it is estimated that of these, between 10,000 and 14,000 titles per year are actually unique titles.

Changes in ILL Protocols. ILL requests not filled at the federation headquarters libraries would be searched on the microfiche MONCAT. If found, the ILL request would be sent directly to the owning library. The state might develop an ILL routing slip to accompany or be a part of the ILL form, to assist in forwarding the ILL request. Obviously, in terms of speed, a library is better off to send an ILL request to a nearby library than to one on the other side of the state. Requests not found will be sent to PNBC.

Ongoing Maintenance of the Union Catalog

This alternative provides a straight-forward method for maintaining the MONCAT. Magnetic tapes are received from each of the book jobbers. Libraries currently utilizing some automation may elect not to participate in the book jobber program. If they decide not to participate, then they will be expected to provide a magnetic tape of all their acquisitions and withdrawals during the past year. On a scheduled basis, the selected vendor will merge the data and create a new edition of the MONCAT. In addition, some method must be found to input records into the MONCAT either where the book jobber is unable to provide a MARC record or items were purchased direct and not through a book jobber. This data entry capability is particularly important for special and school libraries. This direct form of input may be contracted with the vendor, use OCR input forms, etc. The ultimate choice will really depend upon the vendor that is selected to produce the MONCAT.

Retrospective Conversion

Here again, a retrospective conversion project should be given high priority. The options for retrospective conversion were discussed under Alternative # 4.

Impacts

The issue of compensation for net lenders must be addressed for non-federation headquarters libraries. However, if all libraries are a part of the MONCAT then there will be a greater load leveling of the ILL transactions and thus the dollar amounts of compensation for net lenders should not be too large.

ALTERNATIVE # 7: CREATE FEDERATION UNION CARD CATALOGS

Creation of a Montana Union Catalog

Description. Under this alternative no Montana Union Catalog would be created. Rather, a manual card catalog would be created in some, if not all, of the federations. Once these federation union card catalogs had been created then the fill rate within the federation should increase between 5-15%. This alternative would still rely on the recommended communications equipment to communicate ILL requests. However, this alternative is not recommended for the following reasons. First, some of the federation headquarters libraries simply do not have the space to accommodate a federation union card catalog. Second, maintenance of this federation union card catalog would probably require at least one additional full-time position. And third, it is the consultant's belief that the money for this alternative would be better spent pursuing alternatives which lead to the creation of a machine readable MONCAT.

ALTERNATIVE # 8: USING THE RECOMMENDED COMMUNICATIONS SYSTEM TO COLLECT ALL UNFILLED ILL REQUESTS AND THEN ROUTE TO LIBRARIES ON A PRE-DETERMINED SCHEDULE - A "ROUND ROBIN."

Creation of a Montana Union Catalog

Description. This alternative, in fact, does not create a Montana Union Catalog but could be employed as an interim method to reduce the PNBC bill while the first two to three editions of MONCAT have been created. All unfilled ILL requests are collected at one point, e.g., the Montana State Library, where the requests are searched and all remaining unfilled requests are sent on a pre-determined schedule to the other eight libraries. The order of the round robin was determined by selecting libraries with a greater possibility of filling more requests and thus reducing the number of

requests that must be transmitted and searched at each succeeding library. Bozeman and Missoula are last since they will be searching the university library catalogs which already are significant ILL net lenders. Each request is coded and sequentially numbered so that a library does not search one of its own unfilled ILL requests. The previous day's requests that can be filled from that library are noted and sent on the bottom of the round robin message and thus this information is returned to the requesting library. The two main university libraries would exchange their requests on a daily basis prior to sending them to PNBC. Obviously this approach would more quickly utilize those Montana resources that are available - whether known to PNBC or not. Further information about this alternative may be found in an article by Reynolds⁵. Until the recommended control unit, printing terminal and modem equipment has been installed, the existing TWX system would be used.

Based on the results of the ILL survey conducted as a part of this study the following "round robin" schedule is recommended. All unfilled ILL requests are sent to a central collection point, the Montana State Library, during each afternoon. Until a copy of the MONCAT is available, the COM catalogs of the City-County Library of Missoula, Park County Billings Library, the Lewis & Clark Library, and the State Law Library of Montana would be searched prior to sending ILL requests to the Montana State Library. These requests are searched and the remaining unfilled requests are forwarded to Great Falls at 10am the next morning for searching at the Great Falls Public Library. Great Falls in turn sends all the remaining unfilled requests to the Golden Plains Federation at 11:30; Sagebrush Federation at 12:30; and the Broad Valleys Federation at 1:30. The requests are searched at the Bozeman Public Library and the Montana State University Library and all remaining unfilled requests are forwarded to Missoula the next morning for searching at the City-County Library of Missoula and

the University of Montana Library. All remaining unfilled ILL requests are then forwarded to PNBC for the requesting library.

Costs. It is estimated that the costs for such a "round robin" approach to tapping unreported holdings would be about \$1,825 for the transmission of requests to the central collection point using the existing teletype system. Additional charges for forwarding the "round robin" requests are estimated at \$7,910. Communication charges using the recommended communications equipment would be between 60-80% less expensive. Clearly the biggest cost for a individual library will be the time spent checking other libraries' requests received on the daily transmission loop or round robin. It is expected that it will take an average of about 30 minutes to check holdings in each library. Exhibit 13 provides a detailed estimate of the costs involved with this alternative.

Benefits. The benefits can be both substantial and immediate. The ILL survey indicates that about 57% of the PNBC requests can be reduced should this alternative be introduced. This translates into a dollar savings of \$37,600 per year. Teletype communication costs using the round robin are slightly less than those incurred now.

More importantly, this alternative would substantially reduce the time it now takes a request to be forwarded to PNBC, searched and in turn having the request forwarded to the owning library and finally receiving the requested item several weeks later. Use of the round robin should shorten this time to about 4-7 days. In addition, the round robin will highlight the status and bring the problems of resource sharing and ILL into greater focus, e.g., lack of verification, poor spelling, incomplete citations, etc.

Exhibit 13: Alternative # 8. Summary of Costs - Round Robin

	<u>Teletype Charges</u>
Cost of submitting 9,000 requests* to the central collection point - approximately 36 requests/day (about 4,000 ILL requests are found in the COM catalogs of Parmlly Billings, City-County Library of Missoula, the Lewis & Clark Library, and the State Law Library) 36 requests X 30 seconds/requests (transmission time) / 60 seconds = 18 minutes, 50¢ for the 1st min. and 40¢ X 17 min = \$7.30 X 250 days =	\$1,825
5 per day found in the Montana State Library 31 per day sent to Great Falls	1,525
5 per day found at the Great Falls Public Library 26 per day sent to Glasgow	1,275
2 per day found at the Glasgow Public Library 24 per day sent to Miles City	1,175
1 per day found in the Miles City Public Library 23 per day sent to Bozeman	1,125
1 per day found in the Bozeman Public Library 5 per day found in the Montana State University Library 17 per day sent to Missoula	825
2 per day found in the City-County Library of Missoula 3 per day found in the University of Montana Library 12 ILL requests per day sent to PNBC	575
Charges for the two university libraries to exchange ILL requests, 10 per day	525
Margin for cost estimates error, sub-total X 10%	888
TOTALS	\$9,735

* An estimated 13,000 requests per year would be potential round robin requests. (In 1979-80, 8,096 requests were sent initially to PNBC and 4,186 requests were routed to the State Library - See Exhibit 1). Requests currently sent to an in-state resource center would continue. Those not filled, would be entered into the round robin.

Changes in ILL Protocols. The existing ILL protocols would be maintained with the exception that prior to sending a request to PNBC it first must be submitted and make the rounds on the daily round robin. If the ILL request emerges from the "round robin" still unfilled then it is sent to PNBC.

Ongoing Maintenance of the Union Catalog

There is no MONCAT created as a result of this alternative. Hopefully, if this alternative is chosen, it is done so in conjunction with one or more other alternatives. This alternative would only be implemented for three to four years, allowing time for the MONCAT to increase in the number of titles and utility.

Issues

One issue involves whether to include the Parmly Billings Library (partial COM catalog) and the City-County of Missoula Library (partial COM catalog) in any round robin in that they already have COM catalogs which could be distributed to the other federation headquarter libraries. These libraries in turn could look at each COM catalog to determine the holdings of these two libraries. Potentially the Lewis & Clark Library COM catalog could also be distributed but this raises the compensation of net lenders issue when the library is not a federation headquarters library. It would be the recommendation of the consultant that all four COM catalogs be distributed to all federation headquarter libraries on a regular basis and that these catalogs be searched for every ILL request not filled at the federation headquarters library by the federation headquarters library ILL staff.

SUMMARY EXHIBIT

A summary and synopsis of the eight alternatives is presented in Exhibit 14. An examination of Exhibit 14 suggests that while no single alternative emerges with a clear mandate to proceed, several alternatives, in combination, offer promise. These are discussed in the "Action Plan" which follows.

Exhibit 14: Summary of Alternatives

	Thirteen Libraries with WLN	Selected Libraries with WLN	Poor Person's Catalog	Merging Four COM Catalogs	In-state ILL Online System	Current Acquisitions Catalog	Round Robin
<u>MONCAT Data Base</u>							
Quality	Excellent	Excellent	No MONCAT	Good	Good	Good	No MONCAT
Compatibility	Excellent	Excellent	None	Marginal	Marginal	Marginal	None
Completeness	All current cataloging	All current cataloging	Retro-100% current-?	Low	Low	All current cataloging	Includes unreported holdings
Coverage	6 PHL's ^A , SL 6 univ lib's	2 PHL's, SL 3 univ lib's	6 PHL's, SL 2 univ lib's	2 PHL's, 1 public lib	All or select- ed lib's	All or select- ed lib's	6 PHL's, SL 2 univ lib's
Responsibility for accuracy of MONCAT data base	The libraries	The libraries	Vendor	Vendor & Libraries	Libraries & Vendor	Vendor & Libraries	The libraries
With no retrospective conversion: No. titles in data base at end of							
1st year	144,288	144,288	1,100,000 ^B	110,000	170,000	170,000	No MONCAT
3rd year	210,864	210,864	"	140,000	290,000	290,000	"
5th year	277,440	277,440	"	170,000	410,000	410,000	"
<u>Costs</u>							
Total 1st Yr Costs	\$203,757	\$121,991	\$191,000	\$18,000	\$453,000	\$40,000	\$32,000 ^C
Cont'g Yrly Costs	125,410	79,136	none	12,000	71,000	21,000	32,000 ^C
Fed Hq Library Costs	few	few	some	few	few	few	some
<u>Benefits</u>							
Percent of ILL requests likely to be found in Montana	50%	40%	50%	30%	57%	40% 1st Yr ^D	57%
Percent of ILL requests likely to be found via WLN	16%	16%	0	0	0	0	0
Potential reduction in PNBC charges	\$43,550	\$38,500	\$33,000	\$19,800	\$39,900	\$26,400	\$37,600
Average total service time to identify holding library	3-5 days	3-5 days	5-8 days	10-12 days	3-5 days	4-f days	5-8 days
Accuracy of bibliographic records and holdings information	Highest	Highest	Mixed	High	High	High	NA

^A PHL = federation headquarters library; SL = State Library

^B Includes duplicate titles

^C Estimates based on using teletype system. Recommended communication system would cost about \$40,500 to purchase. Yearly communication costs would be \$3,000-\$4,500 and maintenance on equipment would run \$5,850.

^D Estimated

NA = Not Applicable

IV. AN ACTION PLAN FOR MONTANA LIBRARIES

1. A PLAN FOR A MONTANA RESOURCE SHARING NETWORK

While intuitively appealing, the selection of just one alternative is not going to meet the resource sharing needs of Montana libraries. Thus, a combination of alternatives must be examined. However, several observations need to be made. First, academic libraries, especially medium and large size academic libraries such as the University of Montana and Montana State University have a considerable challenge in the area of cataloging and catalog maintenance. This is due to the fact that these types of libraries rarely purchase more than one copy of a title and thus are faced with a significant amount of cataloging. Fortunately, a shared cataloging system such as the WLN system offers considerable relief. About 70% of the users of a bibliographic utility, such as WLN, are academic libraries. Since the WLN data base is relatively large, the amount of original cataloging necessary with such a system is not large. WLN terminals in the academic libraries make considerable sense. The State Library due to the important role that it plays as a provider of library services for state agencies and the backup capabilities that it provides for public libraries, should find that a WLN terminal would be a prudent investment. Second, public libraries buy considerably fewer titles than do academic libraries but they do buy multiple copies of a single title. Thus, public libraries are primarily concerned with circulation control and catalog maintenance activities. Nationwide, about 70% of the installed automated circulation control systems are in public libraries. And third, the libraries that have decided to switch their existing card catalogs to COM catalogs are about evenly split between academic and public libraries.

The long range goal (4-6 years) for resource sharing in Montana ought to be a tool that minimizes the costs and effort involved in creating and maintaining the MONCAT data base. As the MONCAT data base grows in size and increases in utility to facilitate interlibrary loan, an online union catalog becomes cost effective. With such an online system it would be possible for the first Montana library that catalogs a new holding (through WLN, OCLC, COM catalog or a book jobber) and adds it to the MONCAT bibliographic data base, will do so for all other Montana libraries that follow. Thus, a library would first check the online MONCAT data base before ordering a bibliographic record from one of several possible sources. If a bibliographic record was found on MONCAT, the library would simply add its holding symbol and local call number. This online system would also facilitate interlibrary loan through: 1) online searching and verifying using the MONCAT data base; 2) routing online ILL request messages to the nearest holding library (the computer could automatically route the request to the nearest holding library that is not a net lender, thus ensuring a load leveling among Montana libraries); 3) online acknowledgement of the request; and 4) automatic capture of ILL statistics. Such an online system would also be used to provide access to the online search services and various Montana created data bases to enhance and improve reference and referral services, e.g., directory of Montana organizations, human service providers, Montana library directory, new acquisitions in state and federal documents, abstracts of bills before the Montana legislature, etc.

As outlined in Exhibit 15, the alternatives can be arranged to answer the questions: 1) Where do we start?; 2) How do we continue and expand the MONCAT?; 3) How do we obtain access to the MONCAT?; 4) Is retrospective conversion important?; and, 5) Are there some immediate actions that can be taken? The Action Plan is designed to be acceptable, flexible, and viable for Montana libraries and compatible with regional and national bibliographic networks.

Exhibit 15: Relationship of Alternatives

Start

Merge COM Catalogs

Continuing

WLN

Book Jobbers

COM Catalogs

Circ. Systems

Combination

MONCAT Data Base

Access

Microform

Minicomputer-based
Online SystemRetrospective Conversion

YES

Interim Actions

Round Robin

Replace TWX

Where do we start?

a. Create a MONCAT

It is recommended that Montana should create a MONCAT.

It is further recommended that the Resource Sharing Task Force and the State Library jointly prepare specifications for the merging of the four existing COM catalogs to produce the first edition of a MONCAT.

A suggested procedure and the issues that must be resolved during the preparation of the set of specifications were discussed earlier. The specifications would be sent to a number of vendors inviting their proposals. It should take about four-six weeks to prepare such a set of specifications. Providing time for the vendors to react and for the Resource Sharing Task Force to evaluate proposals will take another six-eight weeks. Once a contract is signed with a vendor it should take another 3-4 months before the vendor could produce the first edition of the MONCAT. Obviously, the issue of compensation for a non-federation headquarters library is involved and will be addressed in a subsequent section of this report.

Starting small, i.e., merging of the four existing COM catalogs will provide an opportunity to gain experience in the process of dealing with automation and vendors. Subsequently, the data base will be expanded with records from book jobbers, WLN, OCLC, and the retrospective conversion project.

How do we continue and expand the MONCAT?

It is recommended that each library be allowed an independent course of action that will best meet the needs of

that library. Thus, a combination of alternatives would be implemented.

b. Install WLN Terminals at 5 Locations

It is recommended that WLN terminals should be installed at the State Library, and two ILL centers located at federation headquarters libraries. The six units of the university system have requested terminals from the State legislature. The possibility of regional circulation systems should be explored. Some libraries may embark on COM catalog projects. Other libraries will choose to install OCLC terminals. And all libraries that do not currently have an automated system or are not slated to receive a WLN terminal would have machine readable records, ordered from the book jobbers, entered into the MONCAT. For those items where machine readable records do not exist, original cataloging would be facilitated by the use of OCR forms or renting of a microcomputer which would be shared by several libraries.

Such a course of action will be realistic in that it will directly and immediately affect each library in a positive manner. If a library decides not to pursue automation there is still a way for that library's holdings to be added to the MONCAT and thus contribute to the resource sharing network of the state. This approach will also allow for the integration of records from a variety of sources, such as WLN, OCLC, and book jobbers, to be merged. A library entering current cataloging into the MONCAT data base would stop sending main entry cards to PNBC.

How do we obtain access to the MONCAT?

c. Provide Microform Copies of the MONCAT

It is recommended that microform copies of the MONCAT

be produced and distributed to the six federation headquarters libraries, the State Library, the six university system libraries and other selected libraries.

Initially, 25 copies of the MONCAT would be produced. Microfiche readers are already available at all the libraries that would receive the MONCAT. In addition, most if not all medium sized public libraries in Montana, other potential recipients of the MONCAT, already have microfiche readers. While it is true that a microfiche MONCAT will entail slightly more time to look up each ILL request for possible Montana holdings, initially a microform MONCAT will be less expensive than a state minicomputer-based online ILL system. Federation headquarters libraries deciding to use the motor-driven COM readers could allocate some funds from their existing budgets to purchase the necessary reader.

In three to five years as the size of the data base grows, costs of providing online access to the data base will become competitive with the yearly cumulations of the microform MONCAT. The decision to switch to online access should be reviewed at that time.

Is retrospective conversion important?

d. Proceed with Retrospective Conversion

It is recommended that retrospective conversion be identified as an important key to the success of a MONCAT and thus funds should be designated for distribution to specific libraries for the costs of retrospective conversion.

Libraries that receive WLN terminals would be expected to embark upon a serious retrospective conversion project. At least 15,000 records from each library ought to be entered into the WLN batch retrospective conversion facility. Other libraries, on a selected basis, i.e., the other federation headquarters libraries and some of the other medium sized public libraries, academic libraries, special and school libraries would engage in a selective retrospective conversion project - only convert a portion of the collection to machine readable form. A list of suggested libraries for the selective retrospective conversion project may be found in Appendix B. Leasing a vendor's microcomputer to enter search arguments (cost \$250/month and 10¢ per record for retrospective conversion) and moving the microcomputers from library to library is a suggested approach. Part of the cost of retrospective conversion would be borne by the participating libraries.

A recommended approach to a selective retrospective conversion is to convert all items pertaining to Montana, non-duplicating collection strengths, and all items with imprint dates of 1972 to the present.

Are there some immediate actions that can be taken?

c. Revise Teletype Procedures

It is recommended that the existing teletype procedures be revised to incorporate a "round robin" approach as a way of utilizing unreported Montana holdings.

This new "round robin" procedure would probably be used for about 3-4 years. Periodically, the effectiveness of the round robin should be assessed and the round robin discontinued when it no longer is cost effective, i.e., as the MONCAT data base

grows in size and the percent of ILL requests found via the round robin method declines to 10-25%.

The recommended round robin protocols include checking each ILL request in the MONCAT (initially separate copies of the four COM catalogs would be distributed). For those requests with no holdings, they would be sent to the central collection point, the Montana State Library, during each afternoon. Each request is uniquely identified and assigned a sequential identifying number. These requests are placed in alphabetical order. The unfilled requests are sent to the Great Falls Public Library at 10am the next morning. Great Falls in turn sends all remaining unfilled requests (having deleted those requests that can be filled) to the Golden Plains Federation at 11:30; Sagebrush Federation at 12:30; and the Broad Valleys Federation at 1:30. The requests are searched at the Bozeman Public Library and the Montana State University Library and all remaining unfilled requests are forwarded to Missoula the next morning for searching at the City-County Library of Missoula and the University of Montana Library. Each library along the round robin would attach a message at the bottom of the transmission indicating what ILL request they could fill. They would also delete the filled ILL request from the round robin transmission.

All unfilled requests would then be searched on the WLN system and requests with no holdings would be forwarded to PNBC. Requests with WLN holdings would be forwarded to the WLN holding library for the requesting library.

The two large university libraries would first check MONCAT and then exchange their ILL requests on a daily basis. Requests not filled would be sent to the State Library. If not found, the request would be returned for searching in the WLN system

for a WLN holding library. If not found, the request would be sent to PNBC.

Obviously, the round robin means that ILL protocols must be revised and reflected in the MINE manual. Additional ILL protocols changes that should be considered include:

1. All requests pertaining to law should be sent directly to the State Law Library of Montana.
2. All requests pertaining to mining should be sent first to Montana Tech before they enter the round robin.
3. All requests for a master's or Ph. D. dissertation should be sent directly to the degree granting institution without entering the round robin loop or being sent to PNBC.
4. All medical and health science related requests should be routed directly to the Montana State University Library.
5. Unless specifically requested by the patron, automatically consider a non-fiction ILL request a subject request and thus substitutions are acceptable.
6. All libraries, i.e., public, academic, special and school, should route their ILL requests to their appropriate federation headquarters library.

2. TOTAL COSTS OF THE PLAN

The costs for implementation of the plan include the following elements: A) WLN terminals installed at at six university libraries, the State Library, and two federation headquarters libraries (WLN terminals are already installed at the Parmly Billings Library) are expected to cost about \$203,757 the first year and \$125,410 for continuing annual costs; B) costs to merge the four existing COM catalogs and create

the first edition of the MONCAT are about \$18,000; C) subsequent editions of the MONCAT would be created by the same vendor and include records from a variety of sources - the four COM catalogs, MARC records of current acquisitions obtained from the book jobbers, the retrospective conversion project records, and WLN & OCLC records. The cost for producing the second edition of the MONCAT with all of the records included from the variety of sources is expected to be about \$61,000. Thus, as shown in Exhibit 16, total costs for installing WLN and creating a MONCAT are expected to be about \$263,291.

3. COMPENSATION FOR NET LENDERS

All libraries have a responsibility to loan items through interlibrary loan. Historically however, the majority of Montana libraries have only borrowed items from other libraries, both within Montana and from the Pacific Northwest region. Thus, local library budgets rarely reflect the need for personnel and other costs necessary to handle requests to loan items to other libraries through interlibrary loan. The reasons for this one-way rather than two-way ILL pattern were discussed in the first section of this report. The primary reason for this one-way transaction pattern has been the lack of a Montana Union Catalog. The issue of compensation for net lenders is complex.

As a federation headquarters library, the library receives direct and in-direct benefits for being a headquarters library. One of the major benefits is that the collection of the federation headquarters library is improved through purchases of items paid with federation level funds. The federation headquarters library is also being paid to provide ILL services to their member libraries. Thus, in the consultant's view,

Exhibit 16: Total Costs of Proposed Montana Resource Sharing Network

<u>MONCAT Charges</u>	<u>1st Year</u>	<u>2nd Year</u>
1st edition of MONCAT:		
Merge four COM catalogs	\$18,000	-
Order MARC records from book jobbers	10,000	\$10,000
2nd edition of MONCAT	-	(30,000)
Retrospective Conversion	19,000	19,000
(2nd edition of MONCAT with retrospective conversion records included in MONCAT data base)	-	<u>32,000</u>
SUB-TOTALS	\$47,000	\$61,000

Other Recommended ILL Costs

WLN Installation grant to City- County Library of Missoula	\$6,800	-
Montana ILL Center WLN searches	5,000	\$5,000
WLN (one FHL, State Library and six university libraries)	203,757	125,410
New communications equipment	40,500	-
Communication costs/year	6-8,000	6-8,000
Broad Valleys & Tamarack Federations special budget for other FHL's access to MSU & U of M library collections	24,000	24,000
Increased FHL ILL Book Budgets	18,000	18,000
Compensation for net lenders	10,000	10,000
ULMS Maintenance Charges	<u>3,000</u>	<u>3,000</u>
SUB-TOTALS	\$319,057	\$193,410

Continuing ILL Costs

Expected PNBC Costs	\$35,000	\$21,850
State Library ILL Budget	80,000	80,000
Federation Headquarters Libraries ILL Budgets, 1980-81	<u>314,011</u>	<u>314,011</u>
SUB-TOTALS	\$429,011	\$415,861

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a federation headquarters library should not be eligible for additional compensation as a net lender unless their lending pattern should significantly increase due to their having all their holdings in the MONCAT.

Almost all other Montana libraries have the potential for making a contribution to ILL services - both lending and borrowing. For a majority of these libraries, the amount of borrowing will exceed or roughly equal the amount of loans. However, a few libraries may become significant net lenders and thus compensation becomes an issue.

Thus, for those libraries which are not federation headquarters libraries, but whose ILL loans exceed their Montana ILL borrowing by more than 25%, it is recommended that they be compensated at the rate of \$2.00 per item for all of their Montana net loans that are in excess of 25%.

One potential way to minimize the impacts on Montana net lenders is to utilize these libraries as an ILL provider of last choice. Thus, for a particular ILL request a search is made of MONCAT. Whenever multiple locations are shown, ILL net lenders are the last choice to route the ILL request. Obviously, this approach would also reduce the amount of compensation to net lenders.

4. SOURCE OF FUNDS

These costs are expected to be partially defrayed by the expected reduction in PNBC charges (anticipated to be about \$35,500 the first year and \$48,150 the second year). In addition, the legislature has before it requests from the six university system

libraries and the State Library for WLN terminals. It is hoped that the legislature will see fit to approve these requests. Assuming the legislative approval, it is recommended that a one-time grant of \$6,800 from Coal Severance Tax funds be awarded to the City-County Library of Missoula for the installation of a WLN terminal. In addition, the communication charges should be reduced about \$27,000 per year in annual TWX charges after the recommended equipment has been installed.

Libraries with WLN terminals would be expected to pay their continued operating costs. However, both the Parmlly Billings and the City-County Library of Missoula should be awarded funds for WLN searches made for other federation headquarters libraries' ILL requests. Based on an estimated 10,000 total searches for this purpose, the WLN costs would be \$2,500. Personnel costs for searching and postage are estimated at \$2,500. Thus, the total award would be \$5,000.

It is recommended that the necessary additional costs for the implementation of the proposed Montana Resource Sharing Network, about \$144,300 the first year and \$111,000 the second year (MONCAT Charges plus Other Recommended ILL Costs from Exhibit 16 less assumed State Legislature appropriation of funds for WLN, and less increased FHL ILL Book Budgets), would be taken from the Coal Severance Tax funds prior to their distribution to the federation headquarters libraries.

5. ILL PROTOCOLS

All ILL requests, with the exception of the two university libraries and libraries with MONCAT, will be routed to a federation headquarters library. Requests not filled by federation headquarters library loans would first be searched in the microform MONCAT. If found, the request would be routed directly to the holding library. If not found, the request would be routed to all libraries on the "round robin" loop. If

found, the item would be sent to the requesting library. If not found, the request would be sent to an ILL center - a federation headquarters library with a WLN terminal. Optionally, a federation headquarter's library could purchase a copy of the WLN Resource Directory. Then, the request would be searched in the WLN data base and if found, sent directly to the holding library. If not found in the WLN data base, the request would be forwarded to PNBC with the notation that the request was not found in the MONCAT or WLN data bases. The two university libraries will exchange their ILL requests on a daily basis and then searched on the WLN system. All unfilled requests will be routed to the State Library. If not filled, these requests will then be sent to PNBC.

The proposed MONCAT data base would not be available online in the WLN system. Thus, other libraries in the Pacific Northwest region will not have access to Montana's holdings for ILL purposes and Montana would likely remain a regional net borrower. It would appear that there are four options to solve this problem. First, Montana could pay on a periodic basis to have all the MONCAT titles and their corresponding holdings symbols added to the WLN data base. Second, WLN might become the vendor producing the microform MONCAT, and thus already have all MONCAT records in the WLN data base, in which case this issue no longer exists. Third, copies of MONCAT might be exchanged with other State Libraries in the region. For the latter option, there would be a change in ILL protocols. Prior to sending a ILL request to PNBC, the union catalogs of the exchanging states and provinces would be checked for holdings by the Montana State Library. For example, Oregon and British Columbia have microform monograph union catalogs. And fourth, Montana could hope that by the time they were using an online MONCAT, a standard communications protocol would be agreed upon to facilitate access by libraries outside Montana.

6. KEY FACTORS OF SUCCESS

The operational success of the proposed Montana Union Catalog of Monographs or MONCAT will be dependent on a number of key factors:

- o Designation of one individual as the MONCAT coordinator. This individual would ensure that the magnetic tapes from the book jobbers and bibliographic utilities are received on schedule, and act as liaison with the vendor selected to produce the microform MONCAT.
- o The agreement of the Resource Sharing Task Force, the State Library and the Library Commission as to the validity and necessity for timely implementation of all recommendations. The recommendations do imply a change in the way in which Coal Severance Tax funds will be allocated.
- o Securing any fiscal and other approvals from the Montana Legislature that may be required during 1981.
- o Preparation of a comprehensive set of specifications by the State Library and the Resource Sharing Task Force to be included in a Request for Proposal document to be sent to vendors for the replacement of

the TWX communications system with the recommended equipment - control unit, printing terminal and modem.

- o Preparation of a comprehensive set of specifications to be included in a Request for Proposal document to produce a microform MONCAT. This RFP would be sent to a large number of vendors.
- o Selection of the best vendor based on a complete range of technical, operational and economic criteria.
- o Choice of a cost-effective retrospective conversion process by which some libraries (federation headquarters libraries) may complete a total retrospective conversion; and some libraries (other public, academic, special and school libraries) will complete a selective retrospective conversion.
- o Commencement of a vigorous weeding and discarding program for those libraries to be involved with retrospective conversion.
- o The Resource Sharing Task Force (RSTF) should be continued to monitor the implementation of the recommendations contained in this report. In addition,

the composition of the RSTF should be expanded to include representatives of the private academic colleges, special and school libraries, and library trustees. For the short-term, the Resource Sharing Task Force should continue to be affiliated with the State Library but consideration should be given to a more permanent affiliation with the Montana Library Association.

V. SUMMARY OF RECOMMENDATIONS

Based on the available data and the results of the analysis conducted as a part of this study, it is recommended that:

THE STATE LIBRARY AND THE RESOURCE SHARING TASK FORCE

- o The Library Commission, the State Librarian, federation headquarters libraries, public libraries, trustees, Friends groups, academic, school and special libraries should be far more vocal and effective concerning use of LSCA funds for the daily operation of the Montana State Library.
- o The State Library should provide leadership for the development of a long range Montana Library Services Plan.
- o The State Library and the Resource Sharing Task Force jointly prepare specifications for the replacement of the TWX system with the recommended equipment -control unit, printing terminal, and modem.
- o The Resource Sharing Task Force and the State Library jointly prepare specifications for the merging of the four existing COM catalogs and other sources, such as OCLC tapes, to produce the first and subsequent editions of the MONCAT. MONCAT will be composed of full MARC records and a new edition will be produced yearly. The vendor selected must be able

to merge the records obtained from a variety of sources and should have an Authority Control file.

- o The long range goal of the Resource Sharing Task Force should be to develop an online MONCAT. The proposed microform MONCAT should be developed so that transition to an online MONCAT is economically and technically feasible.
- o Notify all book jobbers that Montana libraries wish to receive MARC records for all current acquisitions from specified libraries except those libraries with WLN terminals or COM catalogs.
- o A combination of alternatives shall be implemented. Specifically, WLN terminals will be installed in five additional sites - at least three university libraries, the State Library, and another federation headquarters library. MARC records for all other libraries are obtained from other sources, including book jobbers - Baker & Taylor, Brodart, and Academic Book Center.
- o The selected vendor would produce the second edition of the MONCAT approximately one year after the book jobbers commence providing MARC records. The MONCAT will be updated yearly.
- o Retrospective conversion be identified as an important key to the success of a MONCAT and thus designated with a specific amount of funds for distribution to specific libraries for retrospective conversion.
- o The continuing importance of ULMS should be recognized through the designation of either Coal Severance Tax funds or LSCA funds for the annual updating, production and distribution of ULMS.

- o More precise guidelines for acceptable ILL expenses and uniform performance measures must be studied by the Resource Sharing Task Force and drawn up by the State Library.
- o The standard ILL statistical reporting form must be improved to reflect the ultimate fill rate and average time to complete an ILL request.
- o The MINE manual should be revised to reflect the new protocols that will be necessary when the recommendations have been implemented.
- o The Resource Sharing Task Force should be continued to monitor the implementation of the recommendations contained in this report. The composition of the Resource Sharing Task Force should be expanded and consideration should be given to affiliation with the Montana Library Association.

FEDERATION HEADQUARTERS LIBRARIES

- o Broad Valleys and Tamarack Federations submit to the State Library a request for a special budget to hire a half-time to full-time person to search the U of M and MSU library catalogs to facilitate access to the collections of the university libraries by other Montana libraries.
- o The budgets for ILL purchases in each of the Federations should be raised to assist the federation headquarters library in meeting the demands for ILL requests. All ILL requests should be reviewed for possible purchase.

- o Federation headquarters libraries should experiment using UPS or a similar service (Greyhound, Trailways) as an alternative to the U.S. Postal Service.
- o ILL request forms should be modified to indicate what verification sources the borrowing library has checked. A current edition of Books In Print is a mandatory minimum for all local libraries.
- o Implement the proposed "round robin" communication of ILL requests via the recommended communications system in conjunction with the State Library and the two university libraries. The existing teletype system or the U.S. Mail would be used until the new equipment is installed.

THE LOCAL LIBRARY

- o The importance of the borrowing library verifying as fully and as carefully as possible must be stressed. Books In Print should be checked for each ILL request. Additional training may be necessary for local library ILL personnel.
- o All ILL requests should be reviewed for possible purchase.
- o Make available services, such as ILL, better known to patrons by placing information signs at exits and developing ILL brochures for distribution throughout the community.
- o The importance of the local library buying titles to meet patron's needs and requests must be recognized. It may be necessary to provide training to staff to utilize the total local collections.

REFERENCES

- 1 The six federations and their corresponding federation headquarters libraries are: Broad Valleys Federation (Bozeman Public Library); Golden Plains Federation (Glasgow Public Library); Pathfinder Federation (Great Falls Public Library); Sagebrush Federation (Miles City Public Library); South Central Federation (Parmly Billings Library); and the Tamarack Federation (City-County Library of Missoula).

- 2 Montana libraries submitting main entry cards to PNBC are: Montana State Library, Montana Historical Society Library, University of Montana Library, Montana State University Library, Montana College of Mineral Science and Technology, Parmly Billings Library, and the Great Falls Public Library. The City-County Library of Missoula provides a copy of their partial COM catalog to PNBC.

- 3 Trezza, A. F. "Resource Sharing: Surmountable Problems," in Library Resource Sharing, Kent, A. & Galvin, T. J. (eds). NY: Marcel Dekker, 1977, pg. 36.

- 4 Library Journal, August 1980, pg. 1594.

- 5 Reynolds, D. J. "Regional Alternatives for Interlibrary Loan: Access to Unreported Holdings." College & Research Libraries, January 1980, 41(1), pg. 33-42.

APPENDICES

Appendix A: Sample ILL Requests and Libraries with Holdings
Number of Requests Reported Held by a Library - - - - -

Rqting Lib	# Rqts	BRV	GPL	Path	Sage	SCen	Tam	L&C	MSL	UM	MSU	Tec	NM	EM	WM	CC	CGF	* Holdings in WLN Data Base	** PNBC	No Holdings in Montana or Region	* Holdings in OCLC Data Base
BRV	101	X	14	24	13	28	31	24	19	21	53	5	10	17	3	7	5	14	64-87	1	14
GPL	32	6	X	12	6	9	12	9	11	7	8	2	1	6	2	4	0	1	16-23	3	6
Path	17	0	1	X	2	6	4	4	4	3	4	4	4	2	2	1	2	3	9-13	2	4
Sage	55	9	6	13	X	23	23	15	13	8	12	1	5	6	0	3	2	8	27-41	5	15
SCen	73	3	3	10	1	X	6	7	10	11	13	0	0	6	0	0	3	22	25-36	15	37
Tam	95	6	13	22	10	30	X	14	20	32	31	9	12	17	8	8	6	15	39-61	10	27
MSL	93	0	3	5	1	14	5	3	X	33	32	6	9	14	0	9	4	27	35-61	7	31
UM	67	1	0	4	0	4	2	1	6	X	6	1	0	3	1	0	2	14	10-19	34	32
MSU	36	1	2	3	0	3	3	3	1	5	X	0	1	4	1	1	1	11	12-25	5	20
Tech	14	3	2	4	1	4	3	3	2	3	4	X	1	2	0	1	1	1	4-9	2	7
NMC	3	0	0	2	0	1	0	1	2	1	2	0	X	0	0	0	1	-	3-3	-	-
EMC	14	1	1	2	0	3	0	3	1	7	5	0	3	X	0	0	1	4	8-11	1	3
CC	10	0	1	3	1	1	2	0	1	3	3	0	1	2	1	X	0	0	4-8	1	2
TOTAL	610	30	46	104	35	126	86	87	90	134	173	28	47	79	18	34	28	120	256-397	86	198
% of Total ILL Rqts		5%	8%	17%	6%	21%	14%	14%	15%	22%	28%	5%	8%	13%	3%	6%	5%	20%	42-65%	14%	32%

* Only searched ILL requests not found in any Montana library. Numbers reflect only titles with holdings attached.

** First Number reflects # of requests with Montana holding libraries known to PNBC;

second number, # of requests with holdings for all other libraries in the Pacific Northwest region.

Appendix B: Potential Libraries for a Selective
Retrospective Conversion Project

Broad Valleys Federation

Hearst Free Library - Anaconda; Dillon City Library - Dillon; Livingston Public Library - Livingston; Department of Community Affairs - Helena; Office of Superintendent of Public Instruction - Helena; and U.S. Geological Survey Library - Helena.

Golden Plains Federation

Glasgow Senior High School Library - Glasgow; Poplar High School Library - Poplar; Roosevelt County Library - Wolf Point; Sheridan County Free Library - Plentywood; and Wolf Point High School Library - Wolf Point.

Pathfinder Federation

Blaine County Library - Chinook; Chouteau County Free Library - Fort Benton; College of Great Falls Library - Great Falls; Columbus Hospital Health Sciences Library - Great Falls; Conrad Public Library - Conrad; Glacier County Library - Cut Bank; Havre Public Library - Havre; Hill County Library - Havre; Indian Education Center Library - Great Falls; Malstrom Air Force Base Library - Great Falls; and the school library collections of Great Falls School District # 1 - Great Falls.

Sagebrush Federation

Custer County High School Library - Miles City; Dawson Community College Library/Media Center - Glendive; Dawson County High School Library - Glendive; Dull Knife Memorial College Library - Lame Deer; Glendive Public Library - Glendive; Henry Malley Memorial Library - Broadus; Miles Community College Library - Miles City; Rosebud County Library - Forsyth; and Sidney Public Library - Sidney.

South Central Federation

Big Horn County Library - Hardin; Laurel Public Library - Laurel; Lewistown City Library - Lewistown; Rocky Mountain College Library - Billings; Roundup Community Library - Roundup; School library collections of Billings School District No. 2 - Billings; and U.S. Department of the Interior, Bureau of Land Management Library - Billings.

Tamarack Federation

Flathead County Free Library - Kalispell; Hamilton Public Library - Hamilton; Lincoln County Free Library - Libby; Rocky Mountain Laboratory Library - Hamilton; School library collections of Missoula School District No. 1 - Missoula; and the School library collections of Missoula County High School District - Missoula.